

BOMBAY UNIVERSITY HANDBOOK

1930-31



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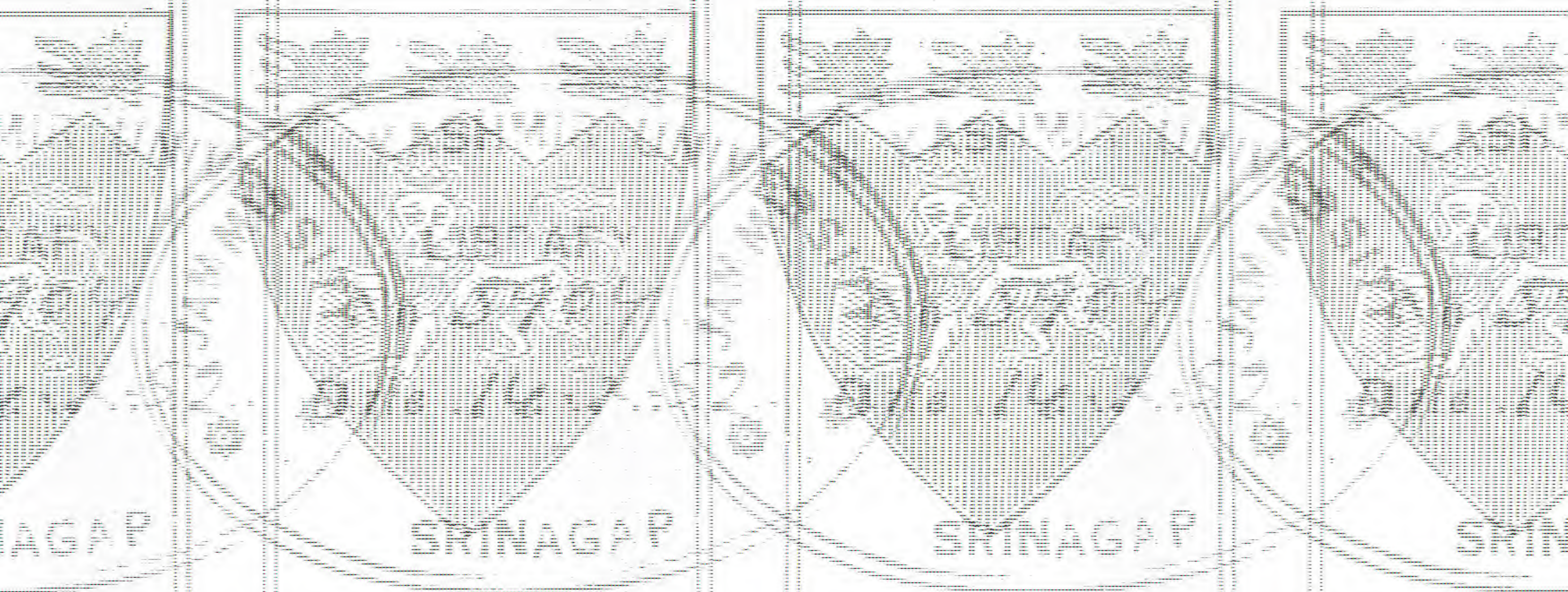
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Part VI. — Text Books	Part VI. — Text Books	Part VI. — Text Books	Part VI. — Text Books
Part VII. — Appendices	Part VII. — Appendices	Part VII. — Appendices	Part VII. — Appendices

Higher education

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NOTE.

The letters S, O, and R prefixed
to the numbers denote Statute,
Ordinance and Regulation.



Addenda and Corrigenda.

1. (a) For "Course II—Selections.....every year" at page 140,
Read

"Course II—A great work of poetry and one of prose of the period 1660–1900, or selections from a great poet and prose-writer of the same."

(b) Delete "with selections from four representative writers, two being poets, and two prosaists" occurring in Course V at page 140.

(c) Substitute the following for Course VI at page 140 :—

"The study of four representative writers of the period read in Course V. Two of the authors shall be poets and two prose writers. Further, the social conditions of the period shall be studied in not more than two other works of literature having a pronounced social reference. (Paper VII), corresponding to this course shall give one section to the period, texts, and the other to the texts of social reference."

2. In chapter XI, Part VII (Text-Books), add the following as a note at page xlv under "For the B.A. Examination."

"In view of the fact that a separate Honours paper, viz, Paper VII, has been constituted for "unseens" no unseen passages for translation into and from English shall be put in Pass Papers I and II."

3. The constitution of papers in Sanskrit, Pali and Ardha-Magadhi as a Subordinate Language for the M.A. Examination from 1933 and onwards shall be as under :—

Subordinate.

Papers I and II.—Select Texts.

Additional for Principal.

Paper III.—Unseen passages for translation from and into the Language and Composition in the Principal Language.

Sanskrit.

Paper IV.—R̥gveda and Nirukta.

Ardha-Magadhi.

Paper IV.—The Agama Literature and linguistic study.

Pali.

Paper IV.—The Older Nikayas and linguistic study.

4. At page 169, under "Sanskrit, Papers V and VI, for "ten "
Read "Eleven."

5. (a) The following book has been prescribed for General Reading in English for the Matriculation Examination of 1932 :—

Longman's Select Stories from Shakespeare and Greek Legends (Omitting 'Othello' pages 50-77 and 'Tempest').

(b) From the book, "Some representative English Prose and Verse, 1600-1930," (selected and Edited by R. C. Goffin), prescribed for *Detailed study* for the Matriculation Examination of 1932, *Omit* Selection from Hamlet.

6. New Regulations relating to M.Sc. Examination :—

(a) Theses should be accepted three times a year, *viz.*, up to June 7, up to September 14, and up to February 14.

(b) Five copies of each thesis should be required from each candidate.

(c) A candidate should give two months' notice of his intention to submit a thesis, should state the title of his thesis, the name of the recognized teacher under whom he worked, and should indicate generally the nature of his results.

7. New Ordinance relating to LL.M. Examination :—

"Until proper arrangements for the control and supervision of post-graduate students are made by the Board of Postgraduate Studies, Principals of all the affiliated Law Colleges are recognized as University Teachers for the postgraduate instruction and candidates for the LL.M. Examination must work under the guidance and supervision of the Principals and must report themselves to the Principals from day to day."

8. Candidates for the degree of M.Ag. should submit five copies of their theses.

9. For 'Vernacular' and 'Vernaculars' occurring in the Handbook

Read "Modern Indian Language" and "Modern Indian Languages."

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The Bombay University Almanac

JUNE 1, 1930

TO

AUGUST 31, 1931

JUNE, 1930.		
1 2 3	Sun. Mon. Tues.	King George the Fifth born, 1865. First Term in Medicine begins.
4 5 6 7	Wed. Thurs. Fri. Sat.	
8 9 10	Sun. Mon. Tues.	First Term in Science (for Agricultural students) begins. <i>Last day for receiving applications for the Jam Shri Vibhaji and Hebbert and La Touche Scholarships, if vacant.</i>
11 12 13 14	Wed. Thurs. Fri. Sat.	
15 16	Sun. Mon.	
17 18 19 20 21	Tues. Wed. Thurs. Fri. Sat.	
22 23 24 25 26 27 28	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	B.Hy. AND D.O. EXAMINATIONS BEGIN. Meeting of the SYNDICATE.
29 30	Sun. Mon.	

JULY, 1930.

1	Tues.	
2	Wed.	
3	Thurs.	
4	Fri.	
5	Sat.	
6	Sun.	
7	Mon.	
8	Tues.	
9	Wed.	
10	Thurs.	
11	Fri.	
12	Sat.	
13	Sun.	
14	Mon.	
15	Tues.	
16	Wed.	
17	Thurs.	
18	Fri.	University of Bombay incorporated, 1857.
19	Sat.	
20	Sun.	
21	Mon.	
22	Tues.	
23	Wed.	
24	Thurs.	
25	Fri.	Meeting of the SYNDICATE.
26	Sat.	
27	Sun.	
28	Mon.	M.Sc. EXAMINATION (BRANCHES OTHER THAN MATHEMATICS) BEGINS. M.Sc. FRENCH AND GERMAN TRANSLATION TEST.
29	Tues.	
30	Wed.	
31	Thurs.	

AUGUST, 1930.		
1	Fri.	
2	Sat.	
3	Sun.	
4	Mon.	
5	Tues.	
6	Wed.	
7	Thurs.	
8	Fri.	
9	Sat.	<i>Last day for receiving applications for Final M.B., B.S. (Part I) Examination.</i>
10	Sun.	
11	Mon.	
12	Tues.	
13	Wed.	
14	Thurs.	
15	Fri.	
16	Sat.	
17	Sun.	
18	Mon.	
19	Tues.	Annual Convocation for Conferring Degrees.
20	Wed.	
21	Thurs.	
22	Fri.	
23	Sat.	
24	Sun.	
25	Mon.	
26	Tues.	First Term in Medicine ends. <i>Last day for receiving Essays for the Dossabhoy Hormusji Cama, Homejee Cursetjee Dady, Karsandas Mulji, Sir George LeGrand Jacob, Ashburner, and Narayan Mahadev Parmanand Prizes and for notifying new subjects for each of these prizes except the first.</i>
27	Wed.	
28	Thurs.	
29	Fri.	
30	Sat.	Meeting of the SYNDICATE.
31	Sun.	

SEPTEMBER, 1930.		
1	Mon.	FINAL M. B., B. S. (Part I) EXAMINATION BEGINS. <i>Last day of application</i> for B. A. (Pass) and B. Sc. (Subsidiary) Examinations.
2	Tues.	
3	Wed.	
4	Thurs.	
5	Fri.	
6	Sat.	
7	Sun.	
8	Mon.	
9	Tues.	
10	Wed.	
11	Thurs.	
12	Fri.	
13	Sat.	
14	Sun.	<i>Last day for receiving applications and theses for M. Com. Examination.</i> <i>Last day of application for First LL.B., Second LL.B. and B.E. Examinations.</i>
15	Mon.	
16	Tues.	
17	Wed.	
18	Thurs.	
19	Fri.	
20	Sat.	
21	Sun.	Second Term in Medicine begins. Meeting of the SYNDICATE. <i>Last day of application for B.Com. Examination.</i>
22	Mon.	
23	Tues.	
24	Wed.	
25	Thurs.	
26	Fri.	
27	Sat.	
28	Sun.	<i>Last day for receiving Essays for the Manockji Limjee, V. N. Mandlik and Pandit Bhagwanlal Indraj Gold Medals, and for notifying new subjects.</i> First Term in Science (for Agricultural students) ends.
29	Mon.	
30	Tues.	

OCTOBER, 1930.		
1 2 3 4	Wed. Thurs. Fri. Sat.	
5 6 7 8 9 10 11	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	B.A. (PASS) AND B.Sc. (SUBSIDIARY) EXAMINATIONS BEGIN. First Term in Arts, in Law, and in Science (for Science and Engineering Students) ends.
12 13 14 15 16 17 18	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	FIRST LL.B., SECOND LL.B., B.COM. AND B.E. (CIVIL AND MECHANICAL) EXAMINATIONS BEGIN.
19 20 21 22 23 24 25	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	<i>Last day for receiving applications</i> from candidates who intend submitting theses in Sanskrit, Persian and Arabic and for receiving intimations from candidates who select the special groups in Mathematics for Papers VII and VIII at the M.A. and M.Sc. Examinations.
26 27 28 29 30 31	Sun. Mon. Tues. Wed. Thurs. Fri.	

NOVEMBER, 1930.		
1	Sat.	Second Term in Science (for Agricultural Students) begins.
2	Sun.	Second Term in Arts, in Law and in Science (for Science and Engineering Students) begins.
3	Mon.	
4	Tues.	
5	Wed.	
6	Thurs.	
7	Fri.	
8	Sat.	
9	S. n.	<i>Last day of application</i> for First M.B., B.S. and Final M.B., B.S. (Part II) Examinations.
10	Mon.	
11	Tues.	
12	Wed.	
13	Thurs.	
14	Fri.	
15	Sat.	
16	Sun.	
17	Mon.	
18	Tues.	
19	Wed.	
20	Thurs.	
21	Fri.	
22	Sat.	
23	Sun.	Meeting of the SYNDICATE.
24	Mon.	
25	Tues.	
26	Wed.	
27	Thurs.	
28	Fri.	
29	Sat.	
30	Sun.	

DECEMBER, 1930.		
1 2 3 4 5 6	Mon. Tues. Wed. Thurs. Fri. Sat.	
7 8 9 10 11 12 13	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	<p>FINAL M.B., B.S. (Part II) and First M.B., B.S. EXAMINATIONS BEGIN.</p> <p><i>Last day of application for Second M.B., B.S. Examination.</i></p>
14 15 16 17 18 19 20	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	<p>Last day of application for M. E. Examination.</p> <p>Second Term in Medicine ends. Meeting of the SYNDICATE.</p>
21 22 23 24 25 26 27	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	
28 29 30 31	Sun. Mon. Tues. Wed.	<p>Last day for submission of reports of work or research by candidates for the M. Ag. Degree.</p>

JANUARY, 1931.		
1 2 3	Thurs. Fri. Sat.	
4 5 6 7 8 9 10	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	SECOND M.B., B.S. EXAMINATION BEGINS.
11 12 13 14 15 16 17	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	M. Sc. FRENCH AND GERMAN TRANSLATION TEST. Third Term in Medicine begins.
18 19 20 21 22 23 24	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	
25 26 27 28 29 30 31	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	Meeting of the SYNDICATE. Annual Meeting of the SENATE. <i>Last day of application for B.T. Examination.</i>

FEBRUARY, 1931.		
1 2	Sun. Mon.	<i>Last day for receiving application and synopsis of thesis for M.A. Examination from Candidates who offer thesis in History and Philosophy branches.</i>
3	Tues.	
4	Wed.	
5	Thurs.	
6	Fri.	
7	Sat.	
8 9 10	Sun. Mon. Tues.	<i>Last day for receiving applications for I.Ag. and B.Ag. Examinations.</i>
11 12 13 14	Wed. Thurs. Fri. Sat.	
15 16 17 18 19	Sun. Mon. Tues. Wed. Thurs.	<i>Last day of application for Intermediate Arts, Intermediate Science, B.A. (Pass and Honours) and B.Sc. (Principal and Subsidiary) Examinations.</i> <i>Last day for receiving applications from candidates for M.A. Examination.</i> Second Term in Science (for Agricultural students) ends. <i>Last day of application for F.E. and S.E. Examinations.</i>
20 21	Fri. Sat.	
22 23 24 25 26 27 28	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	
		Meeting of the SYNDICATE. <i>Last day of application for B.E. Examination.</i>

MARCH, 1931.

1	Sun.	Second Term in Arts, in Law, and in Science (for Science and Engineering Students) ends. <i>Last day for sending in</i> certificates of attendance during the Second Term of candidates for the Intermediate Arts and Intermediate Science Examinations and during the Fourth Term of candidates for the B.A. and B.Sc. Examinations. <i>Last day of application</i> for Intermediate Commerce and B. Com. Examinations.
2	Mon.	
3	Tues.	
4	Wed.	
5	Thurs.	
6	Fri.	
7	Sat.	
8	Sun.	INTERMEDIATE AGRICULTURE, AND B.AG. EXAMINATIONS BEGIN. <i>Last day of application</i> for Matriculation Examination. <i>Last day of application</i> for First and Final M.B., B.S. (Part II) Examinations.
9	Mon.	
10	Tues.	
11	Wed.	
12	Thurs.	
13	Fri.	M. COM., M.E., B.T. (Part I), F.E., S.E. (Civil and Mechanical) EXAMINATIONS BEGIN.
14	Sat.	
15	Sun.	
16	Mon.	
17	Tues.	
18	Wed.	
19	Thurs.	INTERMEDIATE ARTS, INTERMEDIATE SCIENCE, INTERMEDIATE COMMERCE, B.COM., B.E. (Civil and Mechanical) AND B.T. (Part II) EXAMINATIONS BEGIN. Meeting of the SYNDICATE. <i>Last day of application</i> for First LL.B., Second LL.B. and Second M.B., B.S. Examinations.
20	Fri.	
21	Sat.	
22	Sun.	
23	Mon.	
24	Tues.	
25	Wed.	B.Sc. (Principal and Subsidiary), B.A. (Pass and Honours) EXAMINATIONS BEGIN.
26	Thurs.	
27	Fri.	
28	Sat.	
29	Sun.	
30	Mon.	
31	Tues.	

APRIL, 1931.		
1 2 3 4	Wed. Thurs. Fri. Sat.	
5 6 7 8 9 10 11	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	FIRST M.B., B.S. AND FINAL M.B., B.S. (Part II Revised Regulations) EXAMINATIONS BEGIN. The Jam Shri Vibhaji and Hebbert and La Touche Scholarships <i>to be announced</i> for competition during this week, if vacant. Third Term in Medicine ends.
12 13 14 15 16 17 18	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	MATRICULATION EXAMINATION BEGINS. <i>Last day of application</i> for LL.M. and M.D., M.S. and D.Hy. Examinations.
19 20 21 22 23 24 25	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	<i>Last day for receiving theses</i> in History or Philosophy from M.A. candidates. M.Sc. (Mathematics), M.A., FIRST LL.B. AND SECOND LL.B. AND SECOND M.B., B.S. EXAMINATIONS BEGIN. <i>Last day of application</i> for B.Hy. Examination.
26 27 28 29 30	Sun. Mon. Tues. Wed. Thurs.	

MAY, 1931.		
1 2	Fri. Sat.	
3 4 5 6 7 8 9	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	King George the Fifth's Accession, 1910.
10 11 12 13 14 15 16	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	
17 18 19 20 21 22 23	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	<i>Last day of application for D.O. Examination.</i>
24 25 26 27 28 29 30	Sun. Mon. Tues. Wed. Thurs. Fri. Sat.	
31	Sun.	

JUNE, 1931.

1	Mon.	King George the Fifth Born, 1865. First Term in Medicine begins.
2	Tues.	
3	Wed.	
4	Thurs.	
5	Fri.	
6	Sat.	
7	Sun.	First Term in Science (for Agricultural students) begins. <i>Last day for receiving applications for the Jam Sri Vibhaji and Hebbert and La Touche Scholarships, if vacant.</i>
8	Mon.	
9	Tues.	
10	Wed.	
11	Thurs.	
12	Fri.	
13	Sat.	
14	Sun.	LL.M., M.D., M.S. AND D.HY. EXAMINATIONS BEGIN. First Term in Arts, in Law, and in Science (for Science and Engineering students) begins.
15	Mon.	
16	Tues.	
17	Wed.	
18	Thurs.	
19	Fri.	
20	Sat.	
21	Sun.	B.HY. AND D.O. EXAMINATIONS BEGIN. Meeting of the SYNDICATE.
22	Mon.	
23	Tues.	
24	Wed.	
25	Thurs.	
26	Fri.	
27	Sat.	
28	Sun.	
29	Mon.	
30	Tues.	

JULY, 1931.

1	Wed.	
2	Thurs.	
3	Fri.	
4	Sat.	
5	Sun.	
6	Mon.	
7	Tues.	
8	Wed.	
9	Thurs.	
10	Fri.	
11	Sat.	
12	Sun.	
13	Mon.	
14	Tues.	
15	Wed.	
16	Thurs.	
17	Fri.	
18	Sat.	University of Bombay incorporated, 1857.
19	Sun.	
20	Mon.	
21	Tues.	
22	Wed.	
23	Thurs.	
24	Fri.	
25	Sat.	
26	Sun.	
27	Mon.	M.Sc. EXAMINATION (BRANCHES OTHER THAN MATHEMATICS) BEGINS. M.Sc. FRENCH AND GERMAN TRANSLATION TEST.
28	Tues.	
29	Wed.	
30	Thurs.	
31	Fri.	Meeting of the SYNDICATE.

AUGUST, 1931.		
1	Sat.	
2	Sun.	
3	Mon.	
4	Tues.	
5	Wed.	
6	Thurs.	
7	Fri.	
8	Sat.	
9	Sun.	
10	Mon.	
11	Tues.	
12	Wed.	
13	Thurs.	
14	Fri.	
15	Sat.	
16	Sun.	Annual Convocation for Conferring Degrees.
17	Mon.	
18	Tues.	
19	Wed.	
20	Thurs.	
21	Fri.	
22	Sat.	
23	Sun.	First Term in Medicine ends. <i>Last day for receiving Essays for the Dossabhoy Hormusji Cama, Homejee Cursetjee Dady, Karsandas Mulji, Sir George LeGrand Jacob, Ashburner, and Narayan Mahadev Parmanand Prizes and for notifying new subjects for each of these prizes except the first.</i>
24	Mon.	
25	Tues.	
26	Wed.	Meeting of the SYNDICATE.
27	Thurs.	
28	Fri.	
29	Sat.	
30	Sun.	
31	Mon.	

PART I—THE ACT.

(Act IV of 1928 as amended to date)

An Act to amend the law relating to the University of Bombay.

WHEREAS by Act XXII of 1857 a University was established and incorporated at Bombay ;

And whereas the law relating to the said University was amended by the Indian Universities Act, 1904 ;

And whereas it is necessary to reconstitute the said University to enable it to provide greater facilities for higher education and to conduct post-graduate teaching and research in all branches of learning, including technology, while continuing to exercise due control over the teaching given by Colleges affiliated to it from time to time ; And whereas the previous sanction of the Governor-General required by section 80A (3) and the previous sanction of the Governor required by section 80C of the Government of India Act have been obtained for the passing of this Act ; It is hereby enacted as follows :—

CHAPTER I.—PRELIMINARY.

1. This Act may be called the Bombay
Short title. University Act, 1928.

2. This section and sections 1 and 44 shall come into operation
Commencement. at once. The rest of the Act shall come into operation on such date as Government may, by notification in the *Bombay Government Gazette*, appoint in this behalf.

3. In this Act, unless there is anything
Interpretation. repugnant in the subject or context—

(a) "College" means an affiliated College ;

(b) "Fellow" means an *ex-officio* Fellow or an Ordinary Fellow of the University appointed under the provisions of this Act but does not include an Honorary Fellow ;

(c) "Head-master" means the head of a High School registered by the University ;

(d) "Prescribed" means prescribed by the Act or by any Statutes, Ordinances or Regulations made thereunder ;

(e) "Principal" means the head of a College ;

(f) "Registered Graduate" means a graduate registered under the provisions of this Act or of the Indian Universities Act, 1904 ;

(g) "Statutes," "Ordinances" and "Regulations" mean respectively the Statutes, Ordinances, and Regulations of the University made or deemed to have been made under this Act and for the time being in force ;

(h) "Teacher" means such Professor, Reader, Lecturer and person giving instruction in any College as may be declared by the Statutes to be a Teacher ;

(i) "University" means the University of Bombay as reconstituted under this Act ;

(j) "University Department" means any collegiate institution or post-graduate or research department maintained by the University ;

(k) "University Professor" means a person appointed as such by the University ; and

(l) "University Teacher" means a person appointed by the University to give instruction on its behalf.

CHAPTER II.—THE UNIVERSITY.

4. (1) The University shall be and shall be deemed to have been incorporated for the purpose (among others) of making provision for the instruction of students, with power to appoint University Professors and University Teachers, to hold and manage educational endowments, to erect, equip and maintain University laboratories and museums, to make regulations relating to the residence and conduct of students, to lay down courses of instruction for the various examinations, to guide the teaching in Colleges, to inspect Colleges and to take measures to ensure that proper standards of teaching are maintained in them, to hold examinations, to confer degrees, to undertake post-graduate teaching and to promote research, and to do all acts, not inconsistent with this Act, which tend to the promotion of study and research.

(2) The Chancellor, the Vice-Chancellor, the Rector (if any), the Fellows and all persons who may hereafter become or be appointed or elected to be Chancellor, Vice-Chancellor, Rector or Fellows as hereinafter mentioned, so long as they shall continue to be such Chancellor, Vice-Chancellor, Rector or Fellows, are hereby constituted and declared to be one Body Corporate by the name of the University of Bombay ; and such Body Corporate shall, by such name, have perpetual succession and a common seal, and by such name shall sue and be sued.

(3) The University shall be competent to acquire and hold property, both moveable and immoveable, to lease, sell or otherwise transfer any moveable or immoveable property which may have become vested in, or been acquired by it for the purposes of the University and to contract and do all other things necessary for the purposes of this Act.

4A. The territorial limits within which the powers conferred upon the University by this Act shall be exercised shall comprise the whole of the Bombay Presidency (excluding Aden) and such Indian States and other territories as may, from time to time, be notified in this behalf by the Local Government in the *Bombay Government Gazette*.

5. (1) The Chancellor shall have the right to make an inspection or to cause an inspection to be made by such person or persons, as he may direct, of the University, of any institutions associated with the University and of any work conducted or done by the University, and to make an enquiry or to cause an enquiry to be made in like manner in respect of any matter connected with the University. The Chancellor shall in every case give notice to the Senate of his intention to make

an inspection or enquiry or to cause an inspection or enquiry to be made, and the Senate shall be entitled to be represented thereat.

(2) The Chancellor may, after such inspection or enquiry, by order in writing, cancel any decision of the University or any authority thereof in respect of any matter which is not in conformity with this Act and the Statutes, Ordinances and Regulations :

Provided that, before making any such order, he shall call upon the Senate to show cause why such an order should not be made, and if any cause is shown within a reasonable time, he shall consider the same.

6. No person shall be excluded from membership of any of the Religious and other authorities of the University or from admission to tests. any degree or course of study on the sole ground of sex, race, creed or class, and it shall not be lawful for the University to adopt or impose on any person any test whatsoever relating to religious belief or profession in order to entitle him to be admitted thereto as a teacher or student or to hold any office therein or to graduate thereat or to enjoy or exercise any privileges thereof except where in respect of any particular benefaction accepted by the University such test is made a condition thereof.

7. The following shall be the authorities of the University :—
Authorities of the University.

- (1) The Senate,
- (2) The Faculties,
- (3) The Syndicate,
- (4) The Academic Council,
- (5) The Board of Post-graduate Studies,
- (6) Such other bodies as the Senate may declare by Statutes to be authorities of the University.

CHAPTER III.—THE SENATE. ITS POWERS, CONSTITUTION AND DUTIES.

8. The Senate shall consist of the Fellows of the University
Constitution of the Senate. (*ex-officio* and ordinary).

9. (1) The Governor of Bombay, for the time being, shall be
The Chancellor. the Chancellor of the University. He shall, by virtue of his office, be the Head of the University and the President of the Senate and shall, when present, preside at meetings of the Senate and at any Convocation of the University.

(2) The Chancellor shall exercise such powers as may be conferred on him under the provisions of this Act.

10. The Chancellor shall appoint a Vice-Chancellor who shall,
The Vice-Chancellor. save as herein otherwise provided, hold office for two years, and shall be eligible for re-appointment.

11. The Vice-Chancellor shall be responsible for the proper
Powers of the Vice-Chancellor. administration of the University and shall,
(a) in the absence of the Chancellor, preside at the Convocation and meetings of the Senate ;

- (b) convene the Senate ;
- (c) preside when present at the meetings of the Syndicate and exercise such other powers as may be conferred on him by this Act, the Statutes, Ordinances and Regulations.

12. (1) The Senate may create the office of the Rector by a Statute to be framed by a majority of at least three-fourths of the whole number of Fellows.

The Rector.

(2) The Rector shall be a whole-time salaried officer of the University. He shall, subject to the approval of the Government, be appointed by the Senate and shall have rank and precedence next after the Chancellor and the Vice-Chancellor.

(3) The Senate may, subject to the provisions of this Act, frame Statutes prescribing the manner of appointment of the Rector, the salary and conditions of his office and his powers and duties.

13. (1) Fellows. The Fellows of the University shall be—

I. *Ex-Officio*.

- (A) (i) The Chancellor,
- (ii) The Vice-Chancellor,
- (iii) The Rector (if any),
- (iv) The Registrar of the University.
- (B) (i) The Chief Justice of Bombay,
- (ii) The Minister of Education, Bombay,
- (iii) The Director of Public Instruction, Bombay,
- (iv) The Surgeon General with the Government of Bombay,
- (v) The Director of Agriculture, Bombay,
- (vi) The Secretary to the Government of Bombay, Public Works Department,
- (vii) Vice-Chancellors of other Universities, if any, established by law in the Bombay Presidency, and holders of such other offices as are prescribed by Statutes : Provided that the number of such Fellows shall not exceed five.
- (C) All Heads of University Departments.

II. *Ordinary*.

(A) Elected as prescribed below :—

- (i) By one electorate of Principals of Colleges entitled to send up students for degree examination from among themselves as under :—

13

(a) Principals of Arts Colleges as follows :—

- (1) one Principal elected by separate elections to represent the Principals of Arts Colleges in each group as hereinafter defined

5

- (2) three Principals elected by a separate election to represent the Principals of Arts Colleges in all the groups as hereinafter defined

3

(b) Principals of Colleges of pure Science

1

(c) Principals of Colleges of Medicine

1

(d) Principals of Colleges of Agriculture

1

(e) Principals of Colleges of Engineering	1
(f) Principals of Colleges of Law	1
(ii) By University Teachers and Teachers* including Principals from among themselves	20
(iii) One by Head-masters of Schools in each group from among themselves	5
(iv) By public associations or bodies in British India as under :—	15
(a) Municipal Corporation of the City of Bombay	1
(b) Indian Merchants' Chamber	1
(c) Chamber of Commerce	1
(d) Millowners' Association, Bombay	1
(e) Millowners' Association, Ahmedabad	1
(f) Municipal Boroughs of the Gujarat Group	1
(g) Municipal Boroughs of the Deccan Group	1
(h) Municipal Boroughs of the Karnatak Group	1
(i) Municipal Boroughs of the Konkan Group (Except Bombay City)	1
(j) Municipal Boroughs of the Sind Group and the Karachi Municipality	1
(k) District Local Boards of the Gujarat Group	1
(l) District Local Boards of the Deccan Group	1
(m) District Local Boards of the Karnatak Group	1
(n) District Local Boards of the Konkan Group	1
(o) District Local Boards of the Sind Group	1
(v) By registered graduates	25
(vi) By the Faculties	10
(vii) By the Legislative Council of the Governor of Bombay, of whom one shall be the representative of the University on the Council if he is not already a member of the Senate	5

Provided that,—

- (1) every person elected under any of the entries (i), (ii) and (iii) shall hold the office of a Fellow only so long as he occupies the office or comes under the designation which entitled him to be so elected ; and
- (2) the Fellows representing the Legislative Council of the Governor of Bombay shall hold office for the duration of the Legislative Council electing them and thereafter upto the date on which new Fellows are elected by the next Council.

Explanation (1)—For the purposes of this section the Bombay Presidency (excluding Aden) shall be divided into the following groups :—

Name of Group	Territorial extent of the Group.
1 Gujarat group	... Ahmedabad, Surat, Panch Mahals, Kaira and Broach districts.
2 Konkan group	... The City of Bombay and the Nasik, Thana, Bombay Suburban, Ratnagiri and Colaba districts.

Name of Group	Territorial extent of the Group.
3. Deccan group	... Poona, Satara, Sholapur, Ahmednagar, West-Khandesh and East-Khandesh districts.
4. Karnatak group	... Belgaum, Dharwar, Bijapur and Kanara districts.
5. Sind	... Province of Sind.

The Senate shall, by Statute, determine to which of the groups abovementioned, Schools and Colleges in Indian States and other territories within the territorial limits of the University shall be attached.

Explanation (2)—The Municipalities and District Local Boards mentioned in sub-clauses (f), (g), (h), (i), (j), (k), (l), (m), (n) and (o) are free to elect a person, who need not be a member of the Municipality or a District Local Board, to represent them on the Senate.

(B) Nominated by the Chancellor ... 40

(C) Donors to, or for the purposes of, the University of money or property to the value of not less than one lakh of rupees, if willing to serve, to be, subject to the provisions of sections 14, 15 and 17, Fellows for life.

(D) One nominee of each of the bodies giving a donation to, or for the purposes of, the University of money or property to the value of not less than one lakh of rupees : Provided that the right of making any such nomination and, subject also to the provisions of sections 14, 15, 16 and 17, the tenure of any such nominee shall not extend beyond a period of twenty years from the date of the acceptance by the University of any such donation.

Explanation.—For the purposes of this section the value of any property offered as a donation to the University shall mean the market value of such property on the date of acceptance of the donation by the Senate.

(2) If, in the case of any election, the question is raised whether any person is or is not a Principal or a University Professor or University Teacher or Head-master or a Teacher, the question shall be decided by the Vice-Chancellor.

14. (1) If any person being Chancellor, Vice-Chancellor, or Fellow of the said University shall leave India without the intention of returning thereto, his office shall thereupon become vacant.

Office vacated by leaving India.

(2) If the Vice-Chancellor is temporarily absent from India, the Chancellor may appoint another person to act as Vice-Chancellor during the absence of the absent Vice-Chancellor.

15. (1) Any Ordinary Fellow may, by letter addressed to the Chancellor, resign his office and on the acceptance of the resignation the office shall become vacant.

Vacating of office.

(2) If, for a period of twelve consecutive months, any Ordinary Fellow, except a Fellow for life, has not attended a meeting of the Senate, other than a Convocation, the Chancellor may declare his office to be vacant.

(3) Any person, who holds any office in the University by virtue of his being a Fellow, shall cease to hold such office on his ceasing to be a Fellow.

16. (1) The Ordinary Fellows shall, save as herein otherwise provided, hold office for five years.
Term of office of Ordinary Fellows.

(2) An Ordinary Fellow who has vacated his office may, subject to the provisions of this Act, be elected or nominated to be an Ordinary Fellow.

17. The Local Government may, on the recommendation of the Senate supported by at least two-thirds of the whole number of Fellows, cancel the appointment of any person appointed or elected a Fellow of the University. As soon as such order is notified in the *Bombay Government Gazette*, the person so appointed or elected shall cease to be a Fellow ; and he shall not be eligible for re-appointment or re-election until the disqualification has been removed by the Local Government by a notification in the *Bombay Government Gazette*.
The appointment of a Fellow may be cancelled.

18. (1) The Senate shall be the supreme governing body of the University and shall exercise all powers and perform all duties conferred or imposed on it by or under this Act as well as all powers of the University not provided for in this Act.
Powers of the Senate.

(2) In particular, and without prejudice to the generality of the foregoing provision, the Senate may—

(a) save as provided in section 44, make, amend, or repeal Statutes and accept, reject or refer back but not amend draft Statutes submitted by the Syndicate ;

(b) subject to the provisions of this Act, consider and cancel or refer back but not amend Ordinances of the Syndicate, and Regulations of the Academic Council ;

(c) consider and pass resolutions on the Annual Report, Accounts and Estimates ;

(d) consider the Annual Financial Statement placed before it by the Syndicate and pass it with such modifications as the Senate may think fit ;

(e) make provision for the physical training of students ;

(ee) make grants from the funds of the University towards the maintenance of any University Corps established for the University under the Indian Territorial Force Act, 1920 ;

(f) institute and maintain professorships and other teaching posts, University Departments and hostels, found scholarships and prizes, and encourage the pursuit of learning by other means ;

(g) grant and confer degrees ;

(h) elect office-bearers and authorities provided in this Act and Statutes ;

(i) accept donations and endowments, and, if the interests of the University so require, give up any donation or endowment it has accepted ;

(j) consider and decide appeals in cases where such appeal is provided for in the Statutes ;

(k) delegate any of its powers to such authority or authorities as it may deem fit ; and

(l) generally do all such other acts and things as may be necessary or desirable to further the objects of the University.

CHAPTER IV.—THE FACULTIES.

19. (1) The University shall include such Faculties as are constituted by the Senate by Statutes from time to time.

(2) The Senate shall frame Statutes prescribing the constitution of each Faculty.

(3) A Fellow may be assigned, on the recommendation of the Syndicate, to one or more Faculties.

(4) The Syndicate shall frame Ordinances governing the conduct of business of each Faculty and the appointment by each Faculty of its Chairman (to be called the Dean).

(5) The Senate may empower any Faculty to co-opt as members to serve on Boards of Studies controlled by it persons who possess special knowledge of the subject of study represented by the Faculty, but who are not Fellows, in such manner and for such period as may be prescribed by the Syndicate by Ordinance :

Provided that the number of persons so co-opted by any Faculty shall not exceed half the number of Fellows assigned to that Faculty.

CHAPTER V.—THE SYNDICATE.

20. (1) The executive government of the University shall be vested in the Syndicate constituted as follows from among the Fellows :—

- (a) the Vice-Chancellor ;
- (b) the Rector, if any ;
- (c) the Director of Public Instruction, Bombay ;
- (d) seven persons elected by the members of the Academic Council from among themselves as follows :—
 - (i) one to represent each Faculty by separate elections ; and
 - (ii) the remaining if any, to represent the Academic Council generally.

(e) nine persons to be elected by the Senate from among the Fellows who are neither Principals, University Professors, University Teachers, Teachers, nor Head-masters.

(2) Every member of the Syndicate shall hold office for three years, or until he ceases to be a Fellow, whichever period is shorter.

(3) The Senate shall frame Statutes prescribing the manner of election of elected members of the Syndicate and the conditions governing their term of office.

(4) If, in the case of any election, the question is raised whether any person is or is not a Principal or a University Professor or University Teacher or Teacher or Head-master, the question shall be decided by the Vice-Chancellor.

21. The Syndicate shall have power—

- (a) to direct the form, custody and use of the common seal of the University;

(b) subject to the powers conferred by this Act on the Senate, the Vice-Chancellor and the Rector (if any), to regulate and determine all matters concerning the University in accordance with the provisions of this Act, the Statutes and the Ordinances ;

(c) to accept, reject, return to the Academic Council for reconsideration, but not amend Regulations framed by the Academic Council ;

(d) to frame the budget of the University for the consideration of the Senate ;

(e) to administer the funds and property of the University ;

(f) save as otherwise provided by this Act or the Statutes, to appoint on the recommendation of a Committee of Selection, if any, as required by the Act or Statutes, the officers (other than the Chancellor, the Vice-Chancellor and the Rector), University Professors, University Teachers and servants of the University, to define their duties and the conditions of their service, and to provide for the filling of temporary vacancies in their posts ;

(g) to accept, subject to the direction of the Senate, transfer of any moveable or immoveable property on behalf of the University ;

(h) to arrange for and direct the inspection of Colleges and hostels, and to issue instructions for maintaining the efficiency of the Colleges, and in case of disregard of such instructions, to recommend modification of the conditions of affiliation and to take such other steps as it deems proper ;

(i) to call for reports, returns and other information from the Colleges ;

(j) to appoint examiners and to make Ordinances for the conduct of University examinations ;

(k) to publish the results of the University examinations and other tests ;

(l) to control the University library and to appoint a Library Committee : Provided that at least half the members of the Committee shall be appointed from the Academic Council ;

(m) to provide for buildings, premises, furniture, apparatus and other means needed for carrying on the work of the University ;

(n) to enter into, vary, carry out, and cancel contracts on behalf of the University in the exercise or performance of the powers and duties assigned to it by the Act and the Statutes ;

(o) to make, amend and cancel Ordinances ;

(p) to fix, demand and receive such fees for the degrees to be conferred by it and upon admission into the University and for continuance therein and for other purposes of a like nature as may be prescribed by Statutes ;

(q) to make provision for post-graduate instruction and research ; and

(r) to exercise such other powers and perform such other duties as may be conferred or imposed on it by this Act or the Statutes ;

Provided that the Syndicate shall not arrive at any decision in regard to matters referred to in clauses (h) and (j) without inviting and receiving a report thereon from the Academic Council.

CHAPTER VI.—THE ACADEMIC COUNCIL.

22. The Academic Council shall consist of the following members, all of whom need not be Fellows :—
Constitution of the Academic Council.

(i) the Rector, if any, otherwise the Vice-Chancellor.....the Chairman ;

(ii) Deans of Faculties ;

(iii) such number of representatives not exceeding five of the University Professors and whole-time University Teachers, as may be determined by Statute ;

(iv) two Head-masters to be elected by the Senate from among the Fellows ;

(v) twenty representatives of the Boards of Studies or groups of Boards of allied studies as may be determined by Statute ; and

(vi) five persons elected by the Senate from among the Fellows.

23. (1) The Senate shall frame a Statute prescribing the manner of election of the elected members of the Academic Council, and the conditions governing their term of office.
Election of the Academic Council.

(2) If, in the case of any election, the question is raised whether any person is or is not a University Professor or a whole-time Teacher or Head-master, the question shall be decided by the Vice-Chancellor.

24. The Academic Council shall frame Regulations as provided in this Act and shall have the following powers :—
Powers of the Academic Council.

(a) to regulate teaching and examinations within the University ;

(b) to determine and maintain the standards of examinations, remaining responsible for the maintenance of such standards ;

(c) to make Regulations laying down courses of study subject to the approval of the Syndicate ;

(d) to propose to the Syndicate the institution of new University teaching appointments, their duties and emoluments ;

(e) to propose to the Syndicate schemes for the constitution of University Departments, Faculties and Boards of Studies ;

(f) to make Regulations for the award of University scholarships and prizes ;

(g) to recommend to the Syndicate the names of persons to be appointed examiners ;

(h) to make Regulations prescribing equivalence of examinations ;

(i) to arrange for co-ordination of studies and intercollegiate lectures ;

(j) to make Regulations prescribing the conditions to be complied with by candidates, not being students of any College for

degrees, diplomas, licenses, titles, marks of honour, scholarships and prizes conferred or granted by the University ;

(k) to exercise such other powers as may be conferred on it by Statutes ; and

(l) generally to advise the University on all academic matters.

CHAPTER VII.—THE BOARD OF POST-GRADUATE STUDIES.

25. (1) The Board of Post-graduate Studies shall consist of—
The Board of Post-graduate studies.

(i) the Rector, if any, otherwise the Vice-Chancellor.....the Chairman ;

(ii) four members appointed by the Syndicate ;

(iii) three members appointed by the Academic Council ;

(iv) one University Professor appointed by the Academic Council.

(2) The Board shall, subject to the Act, and Statutes, Ordinances and Regulations framed thereunder, control and co-ordinate post-graduate teaching and research in the University Departments and the Colleges and shall recommend to the Syndicate what teachers in the Colleges shall be recognized as University Teachers for post-graduate instruction and research.

CHAPTER VIII.—OTHER UNIVERSITY BODIES.

26. (1) The Senate may, from time to time, frame Statutes constituting Boards of Studies, defining their functions, and attaching each Board to one or more Faculties.
Board of Studies.

(2) The Senate may abolish any Board of Study so constituted.

27. The Senate may, by Statutes, constitute and define the functions of such other bodies as it may from time to time deem necessary for the purpose of carrying out the work of the University, and may abolish any of the bodies so constituted.
Other bodies.

28. (1) Whenever it is necessary to appoint a wholetime University Professor or University Teacher, a Committee of Selection shall be formed.
Committee of Selection.

(2) The members of the Committee shall be—

(a) The Vice-Chancellor (Chairman),

(b) Four persons having special knowledge of the subject, to be selected as follows :—

(i) One, who shall be a member of a Faculty of the University ;——by the Academic Council.

(ii) Three, who shall not be Fellows, members of Faculties, University Professors, University Teachers, or Teachers ;——one by the Academic Council and two by the Syndicate.

(3) The Committee shall investigate the merits of the various candidates, and shall report to the Syndicate the names, arranged in order of merit, of persons, if any, whom it considers to be suitable for the vacant post.

(4) The Syndicate shall make the final selection out of the persons, if any, so recommended.

CHAPTER IX.—DEGREES.

29. The Senate may institute and confer such degrees, and grant Degrees, diplomas, such diplomas, licenses, titles and marks of honour licenses, titles and in respect of degrees and examinations as may be marks of honour. prescribed by Statutes.

30. If not less than two-thirds of the members of the Syndicate recommend that an honorary degree be conferred on any person on the ground that he is, in their opinion, by reason of eminent position and attainments, a fit and proper person to receive such a degree and where their recommendation is supported by not less than two-thirds of the Fellows present at a meeting of the Senate and is confirmed by the Chancellor, the Senate may confer on such person the honorary degree so recommended without requiring him to undergo any examination.

31. (1) Where evidence is laid before the Syndicate showing Cancellation of that any person on whom a degree, diploma, degrees and the like license, title or mark of honour has been conferred and their restoration. by the Senate or who is an Honorary Fellow, has been convicted of what is, in the opinion of the Syndicate, a serious offence, the Syndicate may, after giving the person concerned an opportunity to explain, propose to the Senate that the degree, diploma, license, title or mark of honour or Honorary Fellowship be cancelled, and, if the proposal is accepted by not less than two-thirds of the Fellows of the Senate and is confirmed by the Chancellor, the degree, diploma, license, title, mark of honour or Honorary Fellowship shall be cancelled accordingly.

(2) The degree, diploma, license, title or mark of honour may subsequently be restored on good cause shown.

(3) The procedure for the restoration of a degree, diploma, license, title, or mark of honour, shall, as far as is practicable, be as in sub-section (1) of this section.

CHAPTER X.—UNIVERSITY FUND.

32. (1) The fees charged by the Senate shall be carried to one University Fund. General Fee Fund for the payment of expenses of the University.

(2) Government shall contribute to that fund the sum of Rs. 1,17,000 per annum to be utilized for the recurring expenditure of the University Departments.

(3) The accounts of income and expenditure of the University shall, once in every year, be submitted to the Government of Bombay for such examination and audit as the Government may direct.

CHAPTER XI.—STATUTES, ORDINANCES AND REGULATIONS.

33. (1) The Senate may, from time to time, make Statutes not Statutes—their inconsistent with this Act, for all matters relating scope. to the University.

(2) In particular, and without prejudice to the generality of the foregoing power, such Statutes may provide for—

(a) the declaration of any person to be a "Teacher" under section 3 (h) ;

(b) the declaration of other bodies to be authorities of the University as provided in section 7 (6) ;

(c) the manner of election of the elected Fellows and the elected members of the Syndicate, the Academic Council and the Board of Post-graduate Studies and the term and conditions of their office, the maintenance of a register of registered graduates and the filling up of casual vacancies in the Senate, the Syndicate, the Academic Council and the Board of Post-graduate Studies ;

(d) the powers of the Vice-Chancellor ;

(e) the appointment, conditions of office, powers and duties of the Rector, if any, and the Registrar and of the officers and servants of the University ;

(f) the prescribing of offices the holders of which shall be *ex-officio* Fellows under section 13 (1) (B) (vii) ;

(g) the constitution, reconstitution or abolition of Faculties ;

(h) the procedure at meetings of the Senate, the Syndicate, the Academic Council, the Board of Post-graduate Studies and the Faculties and the quorum of members to be required for the transaction of business ;

(i) the duties of the Academic Council ;

(j) the constitution and powers of Boards of Studies ; the functions of each such Board, the procedure of such Boards and the quorum of members to be required for the transaction of business, and the attaching of each Board to one or more Faculties ;

(k) the holding and control of the Matriculation Examination ;

(kk) the conditions to be complied with by Schools desiring recognition for the purpose of sending up pupils as candidates for the Matriculation Examination and the conditions to be complied with by candidates for the Matriculation Examination whether sent up by recognized Schools or not ;

(l) the constitution, powers and duties of the authorities of the University save as provided in this Act ;

(m) the institution and conferment of degrees and the granting of diplomas, licenses, titles and marks of honour in respect of degrees and examinations ;

(n) the registers of graduates and students to be kept by the University ;

(o) the institution of pension or provident fund for the benefit of the officers, teachers and other servants of the University ;

(p) all matters which, by this Act, may be prescribed by the Statutes ; and

(q) generally, all matters relating to the University for which there is no provision or insufficient provision in this Act and for which provision is, in the opinion of the Senate, necessary.

34. (1) The Statutes may be amended, repealed, or added to, by Statutes—their Statutes made by the Senate in the manner herein-framing, amendment, after provided. repeal and operation.

(2) All Statutes framed by the Senate from time to time shall be submitted for sanction to the Chancellor and they shall not come into operation until the Chancellor has accorded his sanction thereto.

(3) The Senate may take into consideration the draft of a Statute either by its own motion or on a proposal by the Syndicate.

(4) The Senate, before passing a Statute taken into consideration of its own motion and affecting the powers or duties of any officer or authority of the University, shall ascertain and consider the views of the officer or authority concerned and of the Syndicate thereon.

35. (1) Subject to the provisions of this Act and the Statutes, Ordinances—their the Syndicate may frame Ordinances to provide for making and scope. all or any of the following matters, namely:—

- (a) the admission of students to the University ;
- (b) the course of study to be laid down for all degrees and diplomas of the University ;
- (c) the conditions under which students shall be admitted to the degree or diploma courses and to the examinations of the University, and be eligible for degrees, diplomas, licenses, titles and marks of honour ; and the form of the certificate to be produced by a candidate for examination under section 37 and the conditions on which any such certificate may be granted ;
- (d) the recognition of Colleges and hostels ;
- (e) [*Repealed*]
- (f) the residence and conduct of students ;
- (g) the number, qualifications and conditions of appointment of University Professors and University Teachers ;
- (h) the fees to be charged for courses of instruction in the University given by University Professors and University Teachers, for tutorial and supplementary instruction given by the University, upon admission into the University and for continuance therein, for admission to the examinations, degrees and diplomas of the University, for the registration of graduates and for other purposes of a like nature ;
- (i) the conditions of appointment, the mode of appointment and the duties of examiners ;
- (j) the conduct of examinations ;
- (k) the conduct of business of each Faculty and the appointment of the Dean of each Faculty ;
- (l) the duties and powers of the Boards and Committees to be appointed by the University jointly with any other University or body ;
- (m) the discipline to be enforced in regard to the graduates and undergraduates in so far as they come within the jurisdiction of the University for purposes of study and examination ;

(*n*) the extension of University teaching in any suitable centre within the Presidency by means of University Extension Lectures or otherwise ;

(*o*) the rules to be observed and enforced by Colleges in respect of the transfer of students ;

(*p*) the functions of each Faculty ;

(*q*) the fee (if any) to be paid for the entry or retention of a name on any register ;

(*r*) the inspection of Colleges and the reports, returns and other information to be furnished by Colleges ;

(*s*) the registers of students to be kept by Colleges ;

(*t*) the appointment and duties of University Professors and University Teachers ;

(*u*) the mode of execution of contracts or agreements for or on behalf of the University ;

(*v*) generally, all matters which by this Act or by the Statutes, may be provided for by the Ordinances and all matters for which provision is, in the opinion of the Syndicate, necessary for the exercise of the powers conferred, or the performance of the duties imposed on the Syndicate by this Act or the Statutes ;

Provided that the Syndicate shall not arrive at any decision in regard to matters referred to in clauses (*b*), (*c*), (*d*), (*g*), (*i*), (*j*), (*n*) and (*o*) without inviting and receiving a report thereon from the Academic Council.

(2) All Ordinances made by the Syndicate shall, except as otherwise provided by this Act, have effect from such date as it may direct ; but every Ordinance so made shall be laid on the table of the Senate as soon as may be and shall be considered by the Senate at its next meeting. The Senate shall have power, by a resolution passed by a majority of not less than two-thirds of the members present at such meeting, to cancel or refer for reconsideration any such Ordinance.

(3) The Vice-Chancellor shall, on the application of not less than fifty members of the Senate, suspend the operation of any such Ordinance until the Senate has considered it as provided in sub-section (2).

36. (1) The Academic Council may make Regulations consistent with this Act and the Statutes and Ordinances to carry out the duties assigned to it thereunder and shall submit them to the Syndicate for approval.

Regulations—their making and scope.

(2) All Regulations when approved shall, except as otherwise provided by this Act, have effect from such date as the Academic Council may direct ; but every Regulation so made shall be placed on the table of the Senate as soon as may be, and shall be considered by the Senate at its next meeting. The Senate shall have power, by a resolution passed by a majority of not less than two-thirds of the members present at such meeting, to cancel or refer for reconsideration any such Regulation.

(3) If the Syndicate does not approve of a Regulation, the Regulation shall, on a requisition by at least five members of the Syndicate, be referred to the Senate who shall thereupon have all the powers of the Syndicate in this connection. If the Regulation is accepted by the Senate, the provisions of sub-section (2) shall apply to it.

(4) The Vice-Chancellor shall, on the application of not less than fifty members of the Senate, suspend the operation of any such Regulation until the Senate has considered it as provided in sub-section (2) or sub-section (3).

CHAPTER XII.—AFFILIATED COLLEGES.

37. Save on the recommendation of the Syndicate, by special Certificates required order of the Senate, and subject to any Statutes of candidates for examination and Ordinances made in this behalf, no person shall be admitted as a candidate at any University

examination other than an examination for matriculation, unless he produces a certificate from a College to the effect that he has completed the course of instruction prescribed.

38. Any College affiliated to the University before the passing of this Act may continue to exercise the rights conferred upon it by such affiliation, save in so far as such rights may be withdrawn, restricted or modified in the exercise of any power conferred by this Act.

39. (1) A College applying for affiliation to the University shall send a letter of application* to the Registrar, and shall satisfy the Syndicate and the Academic Council—

Affiliation.

(a) that the College is to be under the management of a regularly constituted governing body ;

(b) that the qualifications of the teaching staff and the conditions governing their tenure of office are such as to make due provision for the courses of instruction to be undertaken by the College ;

(c) that the buildings in which the College is to be located are suitable, and that provision will be made, in conformity with the Statutes and Ordinances, for the residence, in the College or in lodgings approved by the College, of students not residing with their parents or guardians, and for the supervision and physical welfare of students ;

(d) that due provision has been or will be made for a library ;

(e) where affiliation is sought in any branch of experimental science, that arrangements have been or will be made in conformity with the Statutes and Ordinances for imparting instruction in that branch of science in a properly equipped laboratory or museum ;

(f) that due provision will, so far as circumstances may permit, be made for the residence of the Principal and some members of the teaching staff in or near the College or the place provided for the residence of students ;

(g) that the financial resources of the College are such as to make due provision for its continued maintenance ; and

(h) that the College rules fixing the fees (if any) to be paid by the students have not been so framed as to involve such competition with any existing College in the same neighbourhood as would be injurious to the interests of education.

*Four copies of the application and all its enclosures should be forwarded to the Registrar. The Syndicate have resolved that an application for the affiliation of a College must reach the Registrar's Office at least nine months before the date on which it is proposed to start the College. This resolution also applies to an application for the extension of affiliation.

The application shall further contain an assurance that, after the College is affiliated, any transference of management and all changes in the teaching staff shall be forthwith reported to the Syndicate.

(2) On receipt of a letter of application under sub-section (1), the Syndicate shall—

(a) direct a local inquiry to be made by a competent person authorized by the Syndicate in this behalf ;

(b) make such further inquiry as may appear to them to be necessary ; and

(c) report to the Senate on the question whether the application should be granted or refused, either in whole or in part, embodying in such report the results of any inquiry under clauses (a) and (b).

And the Senate shall, after such further inquiry (if any) as may appear to them to be necessary, record their opinion on the matter.

(3) The Registrar shall submit the application and all proceedings, if any, of the Academic Council, the Syndicate and Senate relating thereto to the Government, who, after such inquiry as may appear to them necessary, shall grant or refuse the application or any part thereof.

(4) Where the application or any part thereof is granted, the order of the Government shall specify the courses of instruction in respect of which the College is affiliated ; and, where the application or any part thereof is refused, the grounds of such refusal shall be stated.

(5) An application under sub-section (1) may be withdrawn at any time before an order is made under sub-section (2).

40. Where a College desires to add to the courses of instruction in respect of which it is affiliated, the procedure prescribed by section 39 shall, so far as may be, be followed.

41. (1) Every College affiliated to the University, whether before or after the commencement of this Act, shall furnish such reports, returns and other information as the Syndicate, after consulting the Academic Council, may require to enable it to judge of the efficiency of the College.

(2) The Syndicate shall cause every such College to be inspected from time to time by one or more competent persons authorized by the Syndicate in this behalf.

(3) The Syndicate may call upon any College so inspected to take, within a specified period, such action as may appear to them to be necessary in respect of any of the matters referred to in sub-section (1) of section 39.

42. (1) A member of the Syndicate who intends to move that the rights conferred on any College by affiliation be withdrawn, in whole or in part, or modified, shall give notice of his motion and shall state in writing the grounds on which the motion is made.

(2) Before taking the said motion into consideration, the Syndicate shall send a copy of the notice and written statement mentioned in sub-section (1) to the Principal concerned, together with an intimation that

any representation in writing submitted within a period specified in such intimation on behalf of the College will be considered by the Syndicate ;

Provided that the period so specified may, if necessary, be extended by the Syndicate.

(3) On receipt of the representation or on expiration of the period referred to in sub-section (2), the Syndicate, after considering the notice of motion, statement and representation and after such inspection by any competent person authorised by the Syndicate in this behalf, and such further inquiry as may appear to them to be necessary, and after consulting the Academic Council, shall make a report to the Senate.

(4) On receipt of the report under sub-section (3), the Senate shall, after such further inquiry (if any) as may appear to them to be necessary, record their opinion in the matter.

(5) The Registrar shall submit the proposal and all proceedings, if any, of the Academic Council, the Syndicate and Senate relating thereto to the Government, who, after such further inquiry (if any) as may appear to them to be necessary, shall make such order as the circumstances may, in their opinion, require.

(6) Where, by an order made under sub-section (5), the rights conferred by affiliation are withdrawn, in whole or in part, or modified, the grounds for such withdrawal or modification shall be stated in the order.

CHAPTER XIII.—HONORARY FELLOWS.

43. (1) The Chancellor may nominate any person to be an Honorary Fellow for life, who is eminent for his attainments in any branch of learning, or is an eminent benefactor of the University, or is distinguished for services rendered to the cause of education generally.

(2) Notwithstanding anything contained in this Act, any person appointed to be an Honorary Fellow under section 13 of the Indian Universities Act, 1904, shall continue to be an Honorary Fellow for life, and shall be deemed to have been so appointed under this Act.

(3) A person shall not be debarred from appointment as Fellow, member of the Syndicate, member of the Academic Council or other office under this Act, merely on the ground of being an Honorary Fellow.

CHAPTER XIV.—TRANSITORY PROVISIONS.

44. (1) Notwithstanding anything contained in this Act, the first Statutes, Ordinances and Regulations under this Act shall be framed by the Syndicate constituted under the Acts repealed by this Act (in this section referred to as "the present Syndicate") within such time before the date of coming into operation of this Act as Government may fix in this behalf, and on approval by the Chancellor, shall be deemed to have been duly made under this Act.

(2) If the present Syndicate fails to frame the Statutes, Ordinances and Regulations referred to in sub-section (1) within the time therein mentioned, Government may frame such Statutes, Ordinances and Regulations, and the Statutes, Ordinances and Regulations so framed shall be deemed to have been made under this Act.

(3) Till the Senate is constituted as provided in this Act, the Senate and other University bodies constituted under the Acts repealed by this Act and existing on the date on which this Act comes into operation and all officers of the University shall continue in office.

(4) Until the various University bodies other than the Senate are duly constituted under this Act, all their duties (except that of framing Statutes, Ordinances and Regulations) shall be performed by one or more Committees appointed by the Chancellor who shall also frame rules for the proper working of those Committees.

(5) If any difficulty arises as to the first constitution or reconstitution of any authority of the University after the commencement of this Act, or otherwise in first giving effect to the provisions of this Act, Government, as occasion may require, may by order do anything which appears to them necessary for the purpose of removing the difficulty.

45. (1) The Vice-Chancellor shall, after the Senate is constituted under this Act, divide by lot the first Fellows Elected and nominated Fellows to retire by rotation. elected, and nominated under Part II (A) and (B) of sub-section (1) of section 13 into five equal groups, as far as possible, under each of the said heads, the order of the groups being also determined by lot.

(2) Subject to the other provisions of this Act, the Fellows in the first, second, third, fourth and fifth of the said groups shall hold office for one, two, three, four or five years respectively.

(3) Fellows who have vacated their office under this section shall be eligible for re-election and re-nomination.

(4) Nothing contained in sub-sections (1), (2) and (3) shall apply or shall be deemed to have applied in the case of Fellows elected by the Legislative Council of the Governor of Bombay under entry (vii) under the heading II—Ordinary (A) in sub-section (1) of section 13.

46. (1) The Vice-Chancellor shall, after the Syndicate is constituted under this Act, divide the members of the Elected members of the Syndicate to retire by rotation. Syndicate elected under clauses (d) and (e) of sub-section (1) of section 20 into three equal groups, as far as possible under each of the heads, the order of the groups being also determined by lot.

(2) Subject to the other provisions of this Act, the members of the Syndicate in the first, second and third of the said groups shall hold office for one, two or three years respectively.

(3) Members of the Syndicate who have vacated their office under this section shall be eligible for re-election.

CHAPTER XV.—GENERAL.

47. (1) If any question arises regarding the interpretation of any provision of this Act or of any Statute, Ordinance or Regulation, or as to whether any person has been duly elected or appointed as, or is entitled to be, a member of any authority or other body of the University, the matter may be referred to the Chancellor and shall be so referred if ten Fellows so require. The Chancellor shall, after taking such advice as he deems necessary, decide the question, and his decision shall be final.

(2) Nothing in this section shall be deemed to affect in any way the existing jurisdiction of the High Court of Bombay.

48. Every election to any authority of the University under this Act shall be made according to the system of proportional representation by means of the single transferable vote in such manner as may be prescribed by Statutes.

49. No act or proceeding of any authority or other body of the University shall be invalid by reason only of any vacancy in the body doing or passing it or by reason of any want of qualification by or invalidity in the election or appointment of any *de facto* member of the body whether present or absent.

50. The University shall establish for the benefit of its officers, teachers and other servants such pension or provident fund as it may deem fit in such manner and subject to such conditions as may be prescribed by the Senate by Statutes.

51. All property, all rights of whatever kind used, enjoyed or possessed by, and all interests of whatever kind owned by, or vested in, or held in trust by, or for the University of Bombay as constituted under the Acts repealed by this Act as well as all liabilities legally subsisting against the said University shall pass to the University as constituted under this Act.

52. The enactments specified in the Schedule shall be repealed to the extent specified in the fourth column thereof :

Provided that—

(a) this repeal shall not affect the validity of anything already done under any enactment hereby repealed ; and

(b) the appointments of the Registrar and all other officers and servants of the University, and of examiners, validly made under the Acts hereby repealed and subsisting on the date on which this Act comes into operation, shall be deemed to have been validly made under and for the purposes of this Act, and the Registrar and such officers, servants and examiners shall continue to hold office and to act, subject to the conditions governing the tenure of their office or employment, except in so far as such conditions may be altered by competent authority.

SCHEDULE.

ENACTMENTS REPEALED.

(Section 52)

Acts of the Governor General in Council

Year	Number	Short title	Extent of repeal
1857	XXII	The Bombay University Act, 1857.	So much as has not already been repealed.
1904	VIII	The Indian Universities Act, 1904.	The whole Act.

PART II—THE UNIVERSITY.

GENERAL.

Act
Section 4.

(1) The University shall be and shall be deemed to have been incorporated for the purpose (among others) of making provision for the instruction of students, with power to appoint University Professors and University Teachers, to hold and manage educational endowments, to erect, equip and maintain University laboratories and museums, to make regulations relating to the residence and conduct of students, to lay down courses of instruction for the various examinations, to guide the teaching in Colleges, to inspect Colleges and to take measures to ensure that proper standards of teaching are maintained in them, to hold examinations, to confer degrees, to undertake post-graduate teaching and to promote research, and to do all acts, not inconsistent with the Act, which tend to the promotion of study and research.

(2) The Chancellor, the Vice-Chancellor, the Rector (if any), the Fellows and all persons who may hereafter become or be appointed or elected to be Chancellor, Vice-Chancellor, Rector or Fellows as hereinafter mentioned, so long as they shall continue to be such Chancellor, Vice-Chancellor, Rector or Fellows, are hereby constituted and declared to be one Body Corporate by the name of the University of Bombay ; and such Body Corporate shall, by such name, have perpetual succession and a common seal, and by such name shall sue and be sued.

(3) The University shall be competent to acquire and hold property, both moveable and immoveable, to lease, sell or otherwise transfer any moveable or immoveable property which may have become vested in, or been acquired by it, for the purposes of the University and to contract and do all other things necessary for the purposes of this Act.

A. AUTHORITIES OF THE UNIVERSITY.

Act
Section 7.

The following shall be the authorities of the University :—

- (1) The Senate,
- (2) The Faculties,
- (3) The Syndicate,
- (4) The Academic Council,
- (5) The Board of Post-graduate Studies,
- (6) Such other bodies as the Senate may declare by Statutes to be authorities of the University.

CHAPTER I.—THE SENATE.

(a) Constitution of the Senate.

Act
Section 8.

The Senate shall consist of the Fellows of the University (*ex-officio* and ordinary).

[*Vide* Section 13 of the Act, Part 1, pp. 4-6.]

Act
Section 16.

(1) The Ordinary Fellows shall, save as herein otherwise provided, hold office for five years.

(b) Elections to the Senate.[*Vide* Statutes 156–166, pp. 65-66.]**(c) Powers of the Senate.**Act
Section 18.

(1) The Senate shall be the supreme governing body of the University and shall exercise all powers and perform all duties conferred or imposed on it by or under the Act as well as all powers of the University not provided for in the Act.

(2) In particular, and without prejudice to the generality of the foregoing provision, the Senate may—

(a) save as provided in Section 44 of the Act make, amend, or repeal Statutes and accept, reject or refer back but not amend draft Statutes submitted by the Syndicate ;

(b) subject to the provisions of the Act, consider and cancel or refer back but not amend Ordinances of the Syndicate, and Regulations of the Academic Council ;

(c) consider and pass resolutions on the Annual Report, Accounts, and Estimates ;

(d) consider the Annual Financial Statement placed before it by the Syndicate and pass it with such modifications as the Senate may think fit.

(e) make provision for the physical training of students ;

(ee) make grants from the funds of the University towards the maintenance of any University Corps established for the University under the Indian Territorial Force Act, 1920 ;

(f) institute and maintain professorships and other teaching posts, University Departments and hostels, found scholarships and prizes, and encourage the pursuit of learning by other means ;

(g) grant and confer degrees ;

(h) elect office-bearers and authorities provided in the Act and Statutes ;

(i) accept donations and endowments, and, if the interests of the University so require, give up any donation or endowment it has accepted ;

(j) consider and decide appeals in cases where such appeal is provided for in the Statutes ;

(k) delegate any of its powers to such authority or authorities as it may deem fit ; and

(l) generally do all such other acts and things as may be necessary or desirable to further the objects of the University.

(d) Meetings of the Senate.

[UNDER SECTION 33 (h) OF THE ACT.]

(i) General.

S. 1.

Meetings of the Senate shall be held in the Sir Cowasji Jehangir Hall of the University, unless the Chancellor or the Vice-Chancellor otherwise directs.

- S. 2.** The Chancellor, or in his absence the Vice-Chancellor, or in the absence of both, a member elected by the meeting presides at the meetings of the Senate. The Senior Member present shall take the Chair for and until such election only.
- S. 3.** *Twenty* members of the Senate form a quorum, and all questions shall be decided by a majority of votes of the members present, the Chairman, in the case of an equality of votes, having a second or casting vote.
- S. 4.** Such proposals and amendments only as are immediately connected with the University of Bombay and are in accordance with the Act shall be entertained and debated in the Senate.
- S. 5.** No proposal shall be entertained by the Senate that has not, in the first instance, been considered by the Syndicate, or submitted for a period of at least three months for consideration by the Syndicate : Provided that when any proposal has been duly brought before the Senate, it shall be competent to the Senate to deal with all amendments or modifications thereof which it is otherwise competent to the Senate to entertain.
- S. 6.** The Senate shall meet ordinarily once a year on the last Saturday in January, and at other times when convened by the Vice-Chancellor, or in his absence from the Presidency, by the Syndicate.
- S. 7.** A meeting of the Senate shall be convened on the requisition of at least *twenty* members to the Vice-Chancellor.
- S. 8.** Sixteen clear* days before the day fixed for a meeting of the Senate, the Registrar shall forward to each member of the Senate a statement of business to be brought before the meeting and of the terms of all Resolutions to be then proposed, together with the name of the proposer of each, intimation in writing of which has previously reached him. The inclusion of a Report of any Committee of the Senate in the Agenda Paper shall be held to be equivalent to notice of motion for its adoption.
- S. 9.** Notice in writing of proposed amendments and the terms thereof and of motions for any change in the order of business as set forth in the statement must be forwarded so as to reach the Registrar eight clear days before the day of meeting.
- S. 10.** The Registrar shall, five clear days before the day of meeting, forward to each member of the Senate a statement of all the motions and amendments ; and no motion or amendment, of which such notice has not been given, shall be put to the meeting, other than a motion for dissolution, adjournment, or suspension of the sitting, for passing to the next business on the statement, for directing the Syndicate to review their decision, for referring the matter under consideration to the Syndicate or a Faculty for report, or an amendment which shall be accepted by the Chairman as merely formal.

*"Clear days" means days exclusive of the day on which notice reaches the Registrar and of the day of meeting. Thus, if the meeting is fixed for Thursday and "five clear days" notice is required, the notice must reach the Registrar on the previous Friday ; if for Saturday, the notice must reach him on the previous Saturday.

(ii) Order of Business.

- S. 11.** Each member, before he takes his place, shall register his attendance in a book placed for the purpose at the entrance of the place of meeting.
- S. 12.** At the expiration of a quarter of an hour from the time of meeting, the Chairman shall take notice whether there are *twenty* members present ; and if there are not, the meeting shall forthwith be adjourned to such a date as the Chairman may appoint. Such adjournment shall be recorded by the Registrar under the signature of the Chairman. In the case of a meeting adjourned for want of a quorum, no quorum will be required.
- S. 13.** At every meeting the business to be entertained shall, unless the meeting by a special vote otherwise determine, be taken in the following order :—
- (1) The election, if it is part of the business to be entertained at the meeting, of the Chairman.
 - (2) The signing of the minutes of the previous meeting or adjourned meeting.
 - (3) The election, if it is part of the business to be entertained at the meeting, of any official of the University.
 - (4) Any motion for a change in the order of business.
 - (5) Any business and motions of which due notice has been given in the order in which such business and motions are entered in the statement of business and motions to be brought forward subject to the provisions of this Statute and Statute 18.

(iii) Rules of Debate.

- S. 14.** Every motion shall be moved by the member in whose name it stands, or, if he is absent or declines to move it, it may be moved by any other member.
- S. 15.** Every motion at a meeting must be seconded ; otherwise it shall drop. The seconder of a motion may reserve his speech.
- S. 16.** When a motion has been seconded, it shall be stated from the Chair.
- S. 17.** When the proposal has been thus stated, it may be discussed as a question to be resolved simply in the affirmative or negative, or as proposed to be varied by way of amendment. When, before or after debate, no member rises to speak to the motion, the Chairman shall proceed to put the question to the vote in the manner hereinafter mentioned.
- S. 18.** A substantive proposal once brought forward shall not be proposed a second time at the same meeting, or at any adjournment thereof. A proposal substantially identical in part with one already disposed of may be brought forward at the same meeting or at any adjournment thereof with the omission of such part.
- S. 19.** Not more than one proposal and one amendment thereto shall be placed before the meeting at the same time. Each amendment shall be disposed of before the next is moved. All amendments, which are not withdrawn under Statute 28, or which do not violate Statute 21, shall be considered and voted upon. In case no notice of amendment under Statute 9 has been given, the Senate shall at once proceed to consider and to vote upon the proposal.

(iv) Amendments.

- S. 20.** No amendment shall be proposed which would reduce the proposal to a negative form.
- S. 21.** No amendment shall be proposed which raises a question already disposed of by the meeting, or is inconsistent with any resolution already passed by it.
- S. 22.** The order in which amendments to a proposal are to be brought forward shall be determined by the Chairman with reference to their extent and mutual relation.
- S. 23.** An amendment, the substance of which has been disposed of in part, may be modified by its proposer so as to retain only the parts not so disposed of.
- S. 24.** When an amendment has been moved and seconded, it shall be stated from the Chair, and then the debate may proceed on the original proposal and the amendment together; but so far as the question raised by the amendment is one on which he has not yet spoken, any member may speak to that question, though he has spoken on the original question, or a previous amendment.
- S. 25.** (a) Every amendment shall be in such form that it modifies the original motion by any or all of the following methods :—
(1) By addition of words ;
(2) By deletion of words ;
(3) By substitution of words ;
and the mover may state the motion or the part thereof affected as it would stand when so amended.
(b) An amendment must be relevant to and within the scope of the motion to which it is proposed.
(c) An amendment in the alternative should not be moved.
- S. 26.** If any amendment be carried, it shall become part of the motion before the Senate, and the motion shall be modified accordingly.
- S. 27.** When all the amendments have been considered of which due notice has been given, the original motion, or the original motion as amended in course of debate, shall be placed before the Senate and put to the vote without further discussion.

(v) Withdrawal of a Question.

- S. 28.** No question shall be withdrawn from the decision of the Senate without its unanimous consent. If the mover states his wish to withdraw a proposal or amendment and if no objection is stated thereto in the interval allowed by the Chairman for the purpose, the Chairman shall declare that the question is withdrawn with the consent of the Senate.

(vi) Resolution of the Senate into a Committee.

- S. 29.** (a) The Senate may, when it thinks fit, resolve itself into a Committee to consider any item which may be on the Agenda of business.
(b) A motion for the resolution of a meeting into a Committee may be made by any member at any time (but not so as to interrupt a speech) without the notice required under Statute 9, but can only be placed before the Senate for consideration if the Chairman gives permission for this to be done.

(c) No speech shall be allowed in moving the motion.

(d) No such motion shall be considered unless fifteen members rise in support thereof.

(e) The motion, then having been duly seconded, shall be put to the meeting without further discussion and shall only be carried if two-thirds of the members present vote in its favour.

S. 30. (a) When the Senate decides in this manner to resolve itself into a Committee, the Chairman shall be the same as for the meeting of the Senate, and the quorum shall be the same as for a meeting of the Senate.

(b) The manner in which the discussion of the matter under consideration shall be conducted shall be in the discretion of the Chairman. When, in the judgment of the Chairman, the matter has been sufficiently discussed, the Committee shall embody its conclusions in a report to be signed by the Chairman.

(c) The period during which the Senate is sitting in Committee shall be considered as a suspension of the sitting of the Senate, and immediately it terminates, the Senate shall be again called to order by the Chairman, and the report of the Committee's deliberations presented to it by the Registrar.

(d) If any of the resolutions of the Committee involve recommendations not covered by the motion and the amendments to that motion on the Agenda of the meeting, it shall not be considered by the Senate until notice of these recommendations has been given as required under Statute 9, and the meeting of the Senate shall be adjourned to allow this to be done.

(e) A motion made as a result of the deliberations of such a Committee may be presented to the Senate without previous consideration by the Syndicate.

(vii) Adjournment, etc.

S. 31. A proposal "that this meeting be now dissolved" may be moved at any time as a distinct question, but not as an amendment nor so as to interrupt a speech. If the motion is carried, the business before the meeting shall drop.

S. 32. A proposal "that the meeting be now adjourned to some specified time" may be moved at any time as a distinct question, but not as an amendment nor, except on the motion of the Chairman, so as to interrupt a speech. If it be negatived, the debate shall be resumed. The same rule will apply to a meeting of the Senate in Committee.

S. 33. No amendment shall be moved to a proposal under the last preceding section, except one for substituting a different time for that to which it is proposed to adjourn the meeting.

S. 34. A meeting renewed or continued after an adjournment is to be deemed one with that preceding the adjournment: Provided that if the meeting be adjourned to such date as to admit of the notice required by Statute 9, any amendment, otherwise in order, may be moved at an adjourned meeting if the notice so required be duly given.

S. 35. The motion "that the meeting pass to the next business on the statement" may be made at any time as a distinct question, but not as an amendment, nor so as to interrupt a speech. If such a motion be

carried, the proposal under consideration and the amendments thereto shall not be further dealt with at the meeting.

S. 36. No motion for the dissolution, or for the adjournment, of the meeting, or for the suspension of the sitting, or to pass to the next business, shall be made or spoken to during a debate by any member who has spoken in the debate. Any such motion shall take the place of any question that may be before the meeting, and, if not withdrawn, must be disposed of before such question.

S. 37. When a motion of the class contemplated in the last preceding section has been brought forward and negatived, no other motion of that class shall be again brought forward until after the lapse of what the Chairman shall deem a reasonable time ; nor shall a debate be allowed on such second or subsequent motion brought forward during a debate on the same proposal discussed alone, or the same proposal and amendment discussed together.

(viii) Right of Speech and Reply.

S. 38. On each proposal, or proposal and amendment in debate, a member may speak once, subject to the provisions of Statutes 24 and 36.

S. 39. After the mover of a motion or amendment has spoken, the other members may, save as otherwise provided, speak to the motion in such order as the President may call upon them.

S. 40. Save in the exercise of a right of reply or as otherwise provided, no member shall speak more than once, except with the permission of the Chairman for the purpose of making a personal explanation ; but, in such cases no debatable matter shall be brought forward.

S. 41. The mover of a motion may speak a second time on the conclusion of a debate by way of reply.

S. 42. The mover of an amendment, or when there is no amendment, the mover of the original resolution, may reply upon the debate before each vote is taken. But the mover of a motion for a dissolution or adjournment, or for the suspension of the sitting, or for passing to the next business on the statement has no right to reply.

S. 43. No member shall speak to the question after the mover has entered on his reply.

S. 44. The Chairman has the same right of moving or seconding a motion or amendment and of otherwise taking part in the debate as any other member. When the Chairman thus takes part in the debate, he shall vacate the Chair whilst he is addressing the meeting, and the Chair shall during such time be taken by the Senior member present, not being the Chairman.

(ix) Points of Order.

S. 45. Any member may call the Chairman's attention to a point of order even whilst another member is addressing the meeting, but beyond stating the precise point of order raised, he shall not make a speech. Such a call pronounced by the Chairman to be vexatious, and any interruption or obstruction to the progress of the business before the Senate pronounced by the Chairman to be unseemly or unreasonable, shall be deemed a breach of order.

- S. 46. The Chairman shall be the sole judge on any point of order and may call any member to order ; and, if the member so called to order shall, in speaking, disregard such call, the Chairman may direct him to sit down and thereupon another member may speak.
- S. 47. In the event of any contumacious disregard of a ruling or call to order by the Chairman, he may request the member so offending to leave the meeting, and on such request the member named by the Chairman shall be suspended from his functions as a member during the meeting, and shall be bound immediately to withdraw.

(x) Voting.

- S. 48. On putting any question to the vote, the Chairman shall call for an indication of the opinion of the Senate by a show of hands in the affirmative and negative, or by sitting and rising, and shall declare the result thereof according to his opinion. If the votes are actually counted, the number of votes on either side shall be recorded in the minutes.
- S. 49. Any member may then demand a Division except on a motion for adjournment. Voting in all Divisions shall be by ballot.
- S. 50. The Chairman shall thereupon appoint four Tellers, two on each side ; and shall give such directions for effecting the Divisions as he shall consider expedient.
- S. 51. In every Division only such members as were present at the putting of the question shall be entitled to vote. Voting shall be on papers supplied at the meeting by the Registrar and every voting paper shall be returned with or without the vote.
- S. 52. Upon the Chairman announcing the Division to be closed, the Tellers shall state in writing the number on each side, sign the statement, and hand it to the Chairman, together with the voting paper (in two separate bundles), whereupon the Chairman shall declare the result of the Division to the meeting, and the result shall be recorded in the minutes.
- S. 53. If, after a Division has been taken, five members present shall demand a recount, the Chairman shall appoint two or more members to act with the Tellers who shall report the facts found by them to the Chairman, who shall thereupon declare the result to the meeting, and such declaration shall be conclusive.
- S. 54. Pending the recount, the Chairman may, in his discretion, either suspend the sitting or call for such business as may, in his opinion, be most conveniently proceeded with. Business thus entered on shall be proceeded with ; but on its disposal the regular order of subjects, if it has been departed from, shall be resumed.

(xi) Minutes.

- S. 55. After every meeting or adjourned meeting of the Senate, the Registrar shall, as early as possible, send a copy of the minutes of such meeting to the address of each member of the Senate. In the event of any exception being taken to the correctness of the minutes as circulated, the attention of the Chairman shall be called to the matter before he signs the minutes, and he shall make such alterations as he may find to be necessary.

CHAPTER II—THE FACULTIES.

Act
Section 19. (1) The University shall include such Faculties as are constituted by the Senate by Statutes from time to time.

(2) The Senate shall frame Statutes prescribing the constitution of each Faculty.

(3) A Fellow may be assigned, on the recommendation of the Syndicate, to one or more Faculties.

(4) The Syndicate shall frame Ordinances governing the conduct of business of each Faculty and the appointment by each Faculty of its Chairman (to be called the Dean).

(5) The Senate may empower any Faculty to co-opt, as members to serve on Boards of Studies controlled by it, persons who possess special knowledge of the subject of study represented by the Faculty, but who are not Fellows, in such manner and for such period as may be prescribed by the Syndicate by Ordinance :

Provided that the number of persons so co-opted by any Faculty shall not exceed half the number of Fellows assigned to that Faculty.

S. 56. Each Faculty shall consist of—

(a) Members of the Senate assigned to the Faculty ;

(b) Members co-opted by the Faculty to serve on Boards of Studies controlled by it as provided by Section 19(5) of the Act.

S. 57. (a) After the appointment of any Fellow, the Syndicate may from time to time consider and recommend his assignment to one of the Faculties or in the case of persons with special qualifications to two or more Faculties. Such recommendation shall be considered and adopted or rejected at the next following meeting of the Senate.

(b) The qualifications of each Fellow recommended under (a) shall be stated to the Senate and recorded in the minutes of its meetings.

(c) When an Ordinary Fellow who has ceased to hold office is renominated or re-elected, he shall, till the Senate allots him to a Faculty, be deemed to belong to the Faculty or Faculties to which he originally belonged.

S. 58. There shall be four Faculties, namely, of Arts, Science, Law and Medicine.

S. 59. Each Faculty shall meet ordinarily once a year, within three weeks after the fixed date of the Annual Convocation for conferring Degrees, for the purpose of electing a Dean for the year, and at other times when convened by the Dean, or as provided by Ordinances.

S. 60. A meeting of any Faculty shall also be convened by the Dean, or in his absence, by the Senior Member of the Faculty, on the requisition of any three of its members.

S. 61. The Dean, or the Senior Fellow present, shall be the Chairman at such meetings, and the Chairman shall have a vote, and in the case of an equality of votes, a casting vote.

S. 62. Not less than one-fifth of the members of a Faculty shall constitute a quorum for a meeting of that Faculty.

Co-option to, and Functions of, the Faculties.

[UNDER SECTION 35(*p*), 35(*k*) AND 19(5) OF THE ACT.]

0. 1. When a Faculty resolves to co-opt members to serve on Boards of Studies controlled by it, the co-option of such members shall be made in the manner prescribed by Statutes 169-175 (p. 67).
0. 2. The notice of election shall state the number of members to be co-opted and the special subject of study in which the Faculty desires the co-operation of such additional members.
0. 3. Each co-opted member of a Faculty shall hold office for *five* years from the date of appointment and may be re-elected.
0. 4. All questions at a meeting of the Faculty shall be decided by a majority of votes of the members present.
0. 5. The functions of a Faculty shall be—
 - (i) To elect its Dean.
 - (ii) To consider and report on any matter referred to it by the Academic Council and the Syndicate.
 - (iii) To remit any matter to a Board of Studies comprised within the Faculty for consideration and report.
 - (iv) To consider any report or recommendation referred to it by a Board of Studies.
 - (v) To appoint a Committee of the Faculty for any purpose lying within its functions.
 - (vi) To hold meetings of the Faculty or of a Committee of the Faculty jointly with any other Faculty or a Committee thereof, for the discussion of any matter of common interest.
 - (vii) To make any recommendation to the Syndicate and the Academic Council.
0. 6. Each Faculty shall conduct its business at a meeting to be convened for the purpose.

THE DEAN.

0. 7. Each Faculty shall elect its Dean at the meeting to be convened under Statute 59 (p. 29).
0. 8. A Dean shall hold office for one year or until another Dean is elected and may be re-elected.
0. 9. For the purpose of electing a Dean, the procedure shall be in so far as the same is applicable as prescribed in Statutes 129-140 (pp. 59-60).
0. 10. The candidate who has received the highest number of votes at such an election will be declared the Dean of the Faculty.
0. 11. The office of Dean shall be vacated by death, resignation, or by the Dean's ceasing to reside in the Presidency of Bombay for a period of more than three consecutive calendar months, or by his leaving the Presidency of Bombay without giving notice to the Registrar of his intention to return within three calendar months.

CHAPTER III.—THE SYNDICATE.

- Act
Section 20. (1) The executive government of the University shall be vested in the Syndicate constituted as follows from among the Fellows ;
- (a) the Vice-Chancellor ;

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- (b) the Rector, if any ;
- (c) the Director of Public Instruction, Bombay ;
- (d) seven persons elected by the members of the Academic Council from among themselves, as follows :—

- (i) one to represent each Faculty by separate elections ; and
- (ii) the remaining, if any, to represent the Academic Council generally.

(e) nine persons to be elected by the Senate from among the Fellows who are neither Principals, University Professors, University Teachers, Teachers, nor Head-masters.

(2) Every member of the Syndicate shall hold office for three years, or until he ceases to be a Fellow, whichever period is shorter.

(3) The Senate shall frame Statutes prescribing the manner of election of elected members of the Syndicate and the conditions governing their term of office.

(4) If, in the case of any election, the question is raised whether any person is or is not a Principal or a University Professor or a University Teacher or Teacher or Head-master, the question shall be decided by the Vice-Chancellor.

[For election *vide* Statutes 169-175, p. 67.]

S. 63. The Syndicate shall meet ordinarily once a month and at other times when convened by the Vice-Chancellor, or in his absence, by the Senior Fellow in the Syndicate.

S. 64. The office of a Syndic shall be vacated by death, resignation, or by the Syndic's being absent from *four* consecutive ordinary monthly meetings.

S. 65. *Nine* members of the Syndicate shall constitute a quorum for a meeting of the Syndicate and all questions shall be decided by a majority of votes of the members present.

S. 66. The Vice-Chancellor, or in his absence, the Senior Fellow present, shall preside at all meetings of the Syndicate. The Chairman at such meetings shall have a vote, and in the case of an equality of votes, a casting vote.

S. 67. Every authority of the University except the Senate shall report on any subject that may be referred to it by the Syndicate.

S. 68. Any Faculty, or any member of the Senate, may make any recommendation to the Syndicate, and may propose any Statute or Ordinance for the consideration of the Syndicate.

S. 69. The Syndicate, in the exercise of its executive functions, may appoint Committees to carry out administrative work and define their functions, constitution and tenure.

Powers of the Syndicate.

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Section 21.

The Syndicate shall have power—

(a) to direct the form, custody and use of the common seal of the University ;

(b) subject to the powers conferred by the Act on the Senate, the Vice-Chancellor and the Rector (if any), to regulate and determine all matters concerning the University in accordance with the provisions of the Act, the Statutes and the Ordinances ;

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(c) to accept, reject, return to the Academic Council for reconsideration, but not amend Regulations framed by the Academic Council ;

(d) to frame the budget of the University for the consideration of the Senate ;

(e) to administer the funds and property of the University ;

(f) save as otherwise provided by the Act or the Statutes, to appoint on the recommendation of a Committee of Selection, if any, as required by the Act or Statutes, the officers (other than the Chancellor, the Vice-Chancellor and the Rector), University Professors, University Teachers and servants of the University, to define their duties and the conditions of their service, and to provide for the filling of temporary vacancies in their posts ;

(g) to accept, subject to the direction of the Senate, transfer of any moveable or immoveable property on behalf of the University ;

(h) to arrange for and direct the inspection of Colleges and hostels, and to issue instructions for maintaining the efficiency of the Colleges, and in case of disregard of such instructions, to recommend modification of the conditions of affiliation and to take such other steps as it deems proper ;

(i) to call for reports, returns and other information from the Colleges ;

(j) to appoint examiners and to make Ordinances for the conduct of University examinations ;

(k) to publish the results of the University examinations and other tests ;

(l) to control the University library and to appoint a Library Committee: Provided that at least half the members of the Committee shall be appointed from the Academic Council ;

(m) to provide for buildings, premises, furniture, apparatus and other means needed for carrying on the work of the University ;

(n) to enter into, vary, carry out, and cancel contracts on behalf of the University in the exercise or performance of the powers and duties assigned to it by the Act and the Statutes ;

(o) to make, amend and cancel Ordinances ;

(p) to fix, demand and receive such fees for the degrees to be conferred by it and upon admission into the University and or continuance therein and for other purposes of a like nature as may be prescribed by Statutes ;

(q) to make provision for post-graduate instruction and research ; and

(r) to exercise such other powers and perform such other duties as may be conferred or imposed on it by the Act or the Statutes ;

Provided that the Syndicate shall not arrive at any decision in regard to matters referred to in clauses (h) and (j) without inviting and receiving a report thereon from the Academic Council.

SYNDICATE COMMITTEES.

(i) University Publication Board.

- 0. 12.** The University Publication Board shall consist of—
 (i) The Vice-Chancellor ;
 (ii) Deans of Faculties ;
 (iii) Four persons, two of whom shall be members of the Post-graduate Board, appointed by the Syndicate.
- 0. 13.** Members of the Board shall hold office for *three* years. Any casual vacancy caused by death, resignation, etc., shall be filled up by the Syndicate.
- 0. 14.** The Board shall meet annually in September or whenever convened by the Vice-Chancellor *suo moto* or on the requisition of not less than three members of the Board. Four members shall form the quorum for a meeting of the Board.
- 0. 15.** The Vice-Chancellor shall, if present, preside at meetings of the Board, and in his absence, the Senior Fellow present shall preside.
- 0. 16.** All questions shall be decided by a majority of votes of the members present. The Chairman shall have a vote and, in the case of an equality of votes, he shall have a second vote.
- 0. 17.** The functions of the Publication Board shall be—
 (1) To administer the publication grants of the University.
 (2) To undertake the publication of—
 (a) a University Journal,
 (b) such of the results of the School of Post-graduate Studies and Research as the Board may decide for publication,
 (c) any other work, literary or scientific, considered suitable by the Board,
 (d) text-books if sanctioned by the Syndicate,
 (e) University Extension Lectures.

(ii) University Board of Sports.

- 0. 18.** The University Board of Inter-Collegiate Sports and Tournaments shall consist of Principals of the Colleges in the city of Bombay affiliated to the University and of such other members as may be appointed by the Syndicate. The members appointed by the Syndicate shall hold office for *one* year and may be re-appointed.
- 0. 19.** The Board shall meet once in every term by the 15th of July and by the 15th of November or whenever required, to supervise the working of the departments and shall be the final Court of Referees in the event of any dispute between Colleges or between a College and a department or in any other dispute connected with Inter-Collegiate Sports and Tournaments.
- 0. 20.** The Board shall appoint the following Sub-Committees, the Chairman of each of which shall be nominated by the Board :—
 (1) The Athletics Sub-Committee.
 (2) The Badminton "
 (3) The Cricket "

- (4) The Football Sub-Committee.
- (5) The Hockey „
- (6) The Tennis „
- (7) The Finance „

0. 21. The Chairman of each Sub-Committee shall have power to co-opt not more than two permanent members to it who shall hold office for a year.
0. 22. Each College in the city of Bombay affiliated to the University shall be represented on each Sub-Committee by a teacher or student of the College.
0. 23. Each Sub-Committee shall frame rules, draw up programmes, prepare accounts of the previous year and budget estimates for the current year, and submit them for the approval of the Board not later than the 15th July every year.
0. 24. Each Sub-Committee shall, in the case of each Tournament and Sports, select the person to preside at the Prize Distribution and to distribute prizes.

(iii) The Library Committee.

0. 25. The Library Committee shall consist of twelve members appointed by the Syndicate, six of them being members of the Academic Council.
0. 26. The Senior Fellow among the members shall be the Chairman of the Committee.
0. 27. The members of the Committee shall hold office for *three* years and may be re-appointed. Any vacancy on the Committee shall be filled up by the Syndicate.
0. 28. The Committee shall meet once in every term. But the Chairman may, on the requisition of not less than six members of the Committee, convene a meeting within fifteen days of the receipt of the requisition.
0. 29. Six members of the Committee shall be the quorum for a meeting of the Committee.
0. 30. The Chairman, if present, shall preside at all meetings of the Committee, and in his absence, the next Senior Fellow shall preside.
0. 31. All questions shall be decided by a majority of votes of the members present. The Chairman shall have a vote, and in the case of an equality of votes, he shall have a second vote.

Powers.

0. 32. (a) The management of the Library shall vest in the Library Committee subject to the control of the Syndicate: Provided that the Committee shall have full power to appoint its staff except the Librarian who shall be appointed by the Syndicate and grant leave to all the members of the staff.
- (b) Salaries of the said members shall be fixed by the Committee with the previous sanction of the Syndicate, and no member of the staff shall be suspended or dismissed without such sanction.
- (c) The Library Committee shall have power (1) to administer all funds established or set apart by the Syndicate for the purchase of

books and manuscripts or for the general purposes of the Library ; (2) to purchase such books as in its opinion are desirable and as the funds at its disposal permit ; (3) subject to the sanction of the Syndicate to dispose of such books as in its opinion are either worthless, unserviceable or so far destroyed by worms and ants (or otherwise howsoever) as to be useless.

Duties of the Librarian.

- O. 33.** The Librarian shall keep an account of all such funds administered by the Library Committee ; also of all expenditure authorized by the Committee on behalf of the Library. At the end of every financial year he shall submit to the Committee a statement of the Library Accounts for the year, which, when passed by the Committee, shall be forwarded to the University Registrar for submission to the Syndicate.
- O. 34.** There shall be a separate account in the Bank under the name of " Library Account ", and the cheque book shall be kept by the Librarian.
- O. 35.** All bills in respect of books purchased for the Library shall be verified and checked by the Librarian and shall be countersigned by the Librarian in attestation of their correctness.
- O. 36.** All cheques shall be signed by the Registrar after he has satisfied himself that the amounts entered in them are as they are in the bills and countersigned by a member of the Library Committee.

Library Rules.

- O. 37.** The Library shall be open from 11 a. m. to 7 p. m. on all days except holidays and other days on which it shall be reserved for other purposes by order of the Syndicate or of the Library Committee.
- O. 38.** The following persons shall be permitted to read books or manuscripts in the Library :—
- A. Fellows of the University of Bombay.
 - B. Principals and Professors of Colleges affiliated to the University of Bombay.
 - C. Head-masters of Registered Schools.
 - D. The University Staff.
 - E. Graduates of the University.
 - F. Students of affiliated Colleges recommended by the Principal of their College.
 - G. Other persons admitted by special order of the Library committee.
- O. 39.** Readers' tickets shall be issued to eligible persons by the Librarian on application. Such tickets shall remain in force for one year or until cancelled by the Librarian, the Library Committee or the Syndicate, and shall not be transferable.
- O. 40.** Readers shall not write upon, damage, turn down the leaves of, or make any mark upon any book, manuscript or map belonging to the Library ; nor shall they lay the paper on which they are writing upon any book, manuscript or map. No tracing and no copying of any manuscript shall be done without express permission from the Librarian.
- O. 41.** Readers shall have the right, on application to the Librarian, to reserve not more than two books or manuscripts for their use on the

following day, provided that they may not reserve the same books for more than six successive days, and if they are not present in the Library by 12 noon, the books shall thereafter be no longer reserved.

0. 42. The books of the Library except the books and manuscripts referred to in Ordinance 48 shall be issued for purposes of study outside the Library to Fellows and Honorary Fellows of the University and to persons added to Faculties under Section 19 (5) of the Act.
0. 43. Not more than two books or six volumes of a single work shall be at one time in the possession of a borrower.
0. 44. No books shall be removed from the Library by a Fellow until he shall have signed his name in the register kept for the purpose for all the books taken by him, or sent a signed receipt for them to the Librarian.
0. 45. Books and other documents that have been taken out are liable to recall at any time, but if not so recalled they may be kept for a space of a fortnight which may be prolonged by the Librarian at his discretion. Books and documents so called for shall be returned within seven days from the date of the call.
0. 46. Every Fellow taking a book out of the Library and every reader within the Library shall be responsible for its safe custody and return uninjured, and in the event of its being lost or suffering damage (including pencil or ink marks), shall either replace the book or pay such compensation as may be fixed by the Library Committee.
0. 47. The Librarian shall keep a record showing to whom a book is issued and the date of issue and return.
0. 48. No book forming part of the "Reference Collection" nor any book valuable for its rarity or its illustrations, nor any manuscript shall in any circumstances be removed from the Library by any one except on the recommendation of the Library Committee and with the sanction of the Syndicate.
0. 49. The erasure of any mark or any writing on a book, manuscript or map belonging to the Library is strictly prohibited.
0. 50. Conversation, loud talking and smoking are strictly prohibited in the Library.
0. 51. A new book shall not be taken out of the Library during the first three months after it has been received.
0. 52. A list of new books shall be displayed in a conspicuous place in the Library. The Librarian shall keep a book in which those who use the Library may enter the names of books whose purchase is suggested. Such suggestions and any that may be received from Boards of Studies, University Professors, Readers and Lecturers, shall be laid before the Committee at its meetings.
0. 53. Periodical publications shall lie on the table till the receipt of the next number and shall not be taken out of the Library till then.
0. 54. The cost of sending out books shall be defrayed wholly by the borrower.
0. 55. The Library Committee shall have power to refuse admission to any one infringing the rules and regulations of the Library.

(iv) University Garden Committee.

- O. 56.** The University Garden Committee shall consist of four members one of whom shall be the Executive Engineer, Presidency Division, and the other three shall be appointed by the Syndicate for a period of *three years*.
- O. 57.** The Committee shall meet once a year before the Annual Convocation.
- O. 58.** The Committee shall be in charge of the upkeep of the University Gardens.

(v) University Building Committee.

- O. 59.** The University Building Committee shall consist of—
 (i) The Vice-Chancellor.
 (ii) The Executive Engineer, Presidency Division.
 (iii) Two persons appointed by the Syndicate for a period of *three years*.
- O. 60.** The Committee shall meet once a year before the Annual Convocation and at other times when convened by the Vice-Chancellor.
- O. 61.** The Vice-Chancellor shall preside at all meetings of the Committee, and in his absence, the members will elect the Chairman.
- O. 62.** The Committee shall be in charge of the University Buildings, shall recommend to the Syndicate any repairs, alterations or additions to the existing buildings which it may deem necessary or urgent and shall advise the Syndicate in all matters relating to the University Buildings.

(vi) Grants Utilization Committee.

- O. 63.** The Grants Utilization Committee shall consist of the Vice-Chancellor and six other members appointed by the Syndicate for a period of *three years*.
- O. 64.** The Committee shall meet once a year after the Annual Convocation and at other times when convened by the Vice-Chancellor.
- O. 65.** The Vice-Chancellor shall preside at all meetings of the Committee and in his absence the Senior Fellow present shall preside. Three members shall form the quorum for a meeting of the Committee.
- O. 66.** The Committee shall consider all applications for grants except those that come under "Publication Grants" and make its recommendations to the Syndicate.

(vii) Joint Consultation Committee.

[UNDER SECTION 35 (l) OF THE ACT.]

- O. 67.** A Board or Committee for joint consultation or work with any other University or Body shall, when necessary, be appointed by the Syndicate and its powers and duties shall be defined by the Syndicate at the time of the appointment of such Board or Committee.

(viii) University Information Bureau.*Constitution of the Bureau.*

- O. 68.** The Bureau shall consist of twelve members as shown below to be appointed by the Syndicate for a *three years'* tenure of office :—
 2 members of the staff of the Arts Colleges in Bombay,

- 1 member of the staff of a Medical College in Bombay,
- 1 member of the staff of the Victoria Jubilee Technical Institute, Bombay,
- 1 member of the Science staff of any affiliated College,
- 1 member of the Staff of a College of Commerce,
- 1 representative of the Northern Division of the Presidency and Sind,
- 1 representative of the Central and Southern Divisions of the Presidency,
- 1 representative of Law,
- 1 representative of Engineering, and
- 2 persons with personal knowledge of conditions of study in foreign Universities, one of whom at least shall be a woman.

O. 69. The Bureau shall elect its own Chairman.

Permanent Staff.

O. 70. The permanent staff shall consist of the following :—

(1) A Secretary, whose duties may be entrusted at the Syndicate's discretion to any University officer, on an allowance of Rs. 200 a month.

(2) One clerk to be a member of the University Registrar's establishment on a monthly salary of Rs. 130-10-180, seniority to count from the date of his appointment in the Registrar's Office.

(3) One peon to be paid on the University scale *viz.*, a monthly salary of Rs. 12 plus provisional and house-rent allowances aggregating Rs. 17 per mensem; the salary to increase to Rs. 15 by quinquennial increments of Re. 1.

Functions.

O. 71. The functions of the Bureau shall be—

(1) to collect and furnish information in regard to the Universities and other Educational Institutions of Great Britain and, as far as possible, of other foreign countries;

(2) to advise students;

(3) to correspond with foreign Universities and other Institutions with a view to placing Indian students in suitable conditions of study in those Universities and Institutions.

Powers.

O. 72. (1) The Bureau shall have the power to correspond direct with such Universities, Institutions and persons as agree to such direct correspondence and, in other cases, the Bureau shall correspond with the Education Department of the office of the High Commissioner for India.

(2) The Bureau shall have the power to take a deposit from any applicant who desires expenditure to be incurred on his behalf.

(3) The Bureau shall have the power to refuse to forward any application for reasons deemed by it sufficient.

CHAPTER IV.—THE ACADEMIC COUNCIL.

Act
Section 22. The Academic Council shall consist of the following members,
all of whom need not be Fellows :—

(i) the Rector, if any, otherwise the Vice-Chancellor.....
The Chairman ;

(ii) Deans of Faculties ;

(iii) such number of representatives not exceeding five of the University Professors and whole-time University teachers, as may be determined by Statute ;

(iv) two Head-masters to be elected by the Senate from among the Fellows ;

(v) twenty representatives of the Boards of Studies or groups of Boards of allied studies as may be determined by Statute ; and

(vi) five persons elected by the Senate from among the Fellows.

S. 70. The representatives of the University Professors and whole-time University Teachers on the Academic Council shall be two out of whom at least one shall be a University Professor.

S. 71. Each of the following Boards of Studies or groups of Boards of Allied Studies shall elect the number of representatives set against each in the table following :—

<i>Board of Studies in</i>	<i>Number of members.</i>
(1) English Literature	1
(2) Latin, Greek, Hebrew and Modern European Languages	1
(3) Persian, Arabic, Urdu, Avesta and Pahlavi.	1
(4) Sanskrit, Pali and Ardha-Magadhi	1
(5) Marathi, Gujarati, Kanarese, Sindhi	1
(6) History and Economics	1
(7) Logic and Philosophy	1
(8) Teaching	1
(9) Commerce	1
(10) Mathematics	1
(11) Physics and Geology	1
(12) Chemistry	1
(13) Botany and Zoology	1
(14) Engineering	1
(15) Agriculture, including Veterinary Science	1
(16) Laws	2
(17) Medicine	3

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S. 72. The Academic Council will meet ordinarily once in three months and at other times when convened by the Vice-Chancellor, or in his absence, by the Senior Fellow on the Academic Council,

- S. 73.** The office of member of the Academic Council shall be vacated by death, resignation, or by the member being absent from *four* consecutive meetings.
- S. 74.** *Ten* members of the Academic Council shall constitute a quorum for a meeting of the Council and all questions shall be decided by a majority of votes of the members present.
- S. 75.** The Vice-Chancellor, or in his absence, the Senior Fellow present, shall preside at all meetings of the Academic Council. The Chairman at such meetings shall have a vote, and in the case of an equality of votes, a casting vote.
- S. 76.** Each Faculty or the Board of Postgraduate Studies shall report on any subject that may be referred to it by the Academic Council.
- S. 77.** The members of the Academic Council shall, save as provided in Statute 78, hold office for three years : Provided that persons who are elected members by virtue of holding a particular office or answering a particular designation shall hold office only so long as they continue to be in the particular office or answer a particular designation.
- S. 78.** (i) The Vice-Chancellor shall, after the Academic Council is constituted under the Act, divide the members of the Council elected under clauses (v) and (vi) of Section 22 of the Act into three equal groups, as far as possible, under each of the heads, the order of the groups being determined by lot.
- (ii) The members of the Academic Council in the first, second and third of the said groups shall hold office for one, two or three years respectively.
- (iii) The members of the Academic Council who have vacated their office shall be eligible for re-election.

Powers of the Academic Council.

Act
Section 24. The Academic Council shall frame Regulations as provided in the Act and shall have the following powers :—

(a) to regulate teaching and examinations within the University ;

(b) to determine and maintain the standards of examinations, remaining responsible for the maintenance of such standards ;

(c) to make Regulations laying down courses of study subject to the approval of the Syndicate ;

(d) to propose to the Syndicate the institution of new University teaching appointments, their duties and emoluments ;

(e) to propose to the Syndicate schemes for the constitution of University Departments, Faculties and Boards of Studies ;

(f) to make Regulations for the award of University scholarships and prizes ;

(g) to recommend to the Syndicate the names of persons to be appointed examiners ;

(h) to make Regulations prescribing equivalence of examinations ;

(i) to arrange for co-ordination of studies and inter-collegiate lectures ;

(j) to make Regulations prescribing the conditions to be complied with by candidates, not being students of any College, for degrees, diplomas, licenses, titles, marks of honour, scholarships and prizes conferred or granted by the University ;

(k) to exercise such other powers as may be conferred on it by Statutes ; and

(l) generally to advise the University on all academic matters.

CHAPTER V.—(i) THE BOARD OF POST-GRADUATE STUDIES.

Act
Section 25.

(1) The Board of Post-Graduate Studies shall consist of—

(i) the Rector, if any, otherwise the Vice-Chancellor.....the Chairman ;

(ii) four members appointed by the Syndicate ;

(iii) Three members appointed by the Academic Council ;

(iv) one University Professor, appointed by the Academic Council.

(2) The Board shall, subject to the Act, and Statutes, Ordinances and Regulations framed thereunder, control and co-ordinate post-graduate teaching and research in the University Departments and the Colleges and shall recommend to the Syndicate what teachers in the Colleges shall be recognized as University Teachers for post-graduate instruction and research.

S. 79. The Board of Postgraduate Studies shall meet ordinarily once in three months and at other times when convened by the Vice-Chancellor, or in his absence, by the Senior Fellow on the Board.

S. 80. The office of member of the Board of Postgraduate Studies shall be vacated by death, resignation, or the member being absent from *four* consecutive meetings.

S. 81. The procedure at a meeting of the Board of Postgraduate Studies shall, as far as possible, be the procedure laid down for the Syndicate meetings in Statutes 65 and 66 (page 31).

S. 82. The Vice-Chancellor, or in his absence, the Senior Fellow present, shall preside at all meetings of the Board of Postgraduate Studies. The Chairman at such meetings shall have a vote, and, in the case of an equality of votes, a casting vote.

S. 83. Each Faculty shall report on any subject that may be referred to it by the Board of Postgraduate Studies.

S. 84. The members of the Board shall, save as provided in Statute 85, hold office for *three* years.

S. 85. (i) The Vice-Chancellor shall, after the Board of Postgraduate Studies is constituted under the Act, divide the members of the Board elected under clauses (ii) and (iii) of Section 25(1) of the Act into three equal groups, as far as possible under each of the heads, the order of the groups being determined by lot.

(ii) The members of the Board in the first, second and third of the said groups shall hold office for one, two or three years respectively.

(iii) The members of the Board who have vacated their office shall be eligible for re-election.

(ii) POSTGRADUATE TEACHING AND UNIVERSITY DEPARTMENTS.

(1) *Postgraduate Teaching.*

- O. 73. Postgraduate teaching shall, so far as possible, be carried on in the University, but the Board of Postgraduate Studies may approve of any other arrangement for the purpose.
- O. 74. All candidates for postgraduate degrees must work under* a University Professor, a whole-time University Teacher or a University Teacher.
- O. 75. The University Teachers shall conduct the postgraduate studies under the control of, and subject to the bye-rules made by, the Board of Postgraduate Studies.
- O. 76. Subject to the Act, Statutes, Ordinances and Regulations, the Board of Postgraduate Studies may make bye-rules for the control and co-ordination of postgraduate studies in the University.
- O. 77. All candidates for postgraduate degrees will have to be registered at the office of the University Registrar on payment of a fee of Rs. 5.

(2) *The University Departments.*

- O. 78. There shall be the following University Departments in the University :—
 (a) Department of Economics.
 (b) Department of Sociology.
- O. 79. The Senior University Professor, or when there is no Professor, the senior whole-time University Teacher, shall be the head of the Department.
- O. 80. The salary of the University Professor shall be Rs. 800 rising by annual increments of Rs. 50 to Rs. 1,000 and of the whole-time University Teacher or Reader shall be Rs. 550 rising by the annual increments of Rs. 50 to Rs. 750.
- O. 81. Every postgraduate student of the University shall pay a fee of Rs. 40 per term.

Rules made by the Board of Postgraduate Studies.

1. No student studying *privately* will be allowed in 1931 and subsequent years to appear for the *first* time for an examination for a Master's or Doctor's degree of the University.

2. Every student who intends to appear for the first time for an examination for a Master's or Doctor's degree in 1931 and subsequent years has to register his name as a postgraduate student at the office of the University Registrar within one month of the date of commencement of the academic year in which he begins his studies.

3. Applications for registration as postgraduate students must be made in the prescribed forms which can be had *gratis* from the office of the Registrar.

4. No persons other than those employed in, or attached to, a College affiliated to this University shall be recognized as University

*'To work under' means 'to work under the guidance or direction of'.

Teachers for post-graduate instruction and research under Section 25(2) of the Act.

5. Candidates who have passed or failed in a subject or in a group of it at an examination for a Master's or Doctor's degree shall not be eligible to appear *privately* but have to join a College and work under a University Teacher if they want to appear in a different subject or in a different group of a subject.

6. All candidates appearing for an examination for a Master's or Doctor's degree in 1931 and subsequent years must have worked under a University Professor or University Teacher for the prescribed period after passing the Bachelor's degree examination.

7. A candidate who has already taken a post-graduate degree has to get himself registered if he wants to take a different post-graduate degree or in a subject different from the one in which he has already taken his degree and in either event has to undergo his studies for the prescribed period under a University Professor or a University Teacher.

CHAPTER VI.—(i) BOARDS OF STUDIES.

[UNDER SECTION 7(6) AND 33 (j) OF THE ACT.]

S. 86. Boards of Studies may be constituted by the several Faculties from among their members for the subjects of University studies as under :—

Faculty of Arts.

- | | |
|------------------------------------|-----------------------------|
| (i) English Literature. | (ix) Kanarese. |
| (ii) Latin, Greek and Hebrew. | (x) Sindhi. |
| (iii) Persian, Arabic and Urdu. | (xi) History and Economics. |
| (iv) Modern European Languages. | (xii) Logic and Philosophy. |
| (v) Sanskrit, Pali, Ardha-Magadhi. | (xiii) Teaching. |
| (vi) Avesta and Pahlavi. | (xiv) Commerce. |
| (vii) Marathi. | |
| (viii) Gujarati. | |

Boards (vi) and (x) shall each consist of three members, Board (xiii) shall consist of seven members, Board (xiv) of five members and Boards (vii), (viii) and (ix) shall each consist of not less than three and not more than five members. Each of the other Boards shall consist of not less than three and not more than eight members.

Faculties of Arts and Science.

Mathematics.—The Board shall consist of eight members of whom four shall be elected by the Faculty of Arts and four by the Faculty of Science.

Faculty of Science.

- | | |
|-----------------|--|
| (i) Physics. | (v) Geology. |
| (ii) Chemistry. | (vi) Engineering. |
| (iii) Botany. | (vii) Agriculture, including Veterinary Science. |
| (iv) Zoology. | |

Boards (i), (ii), (iii), (iv) and (v) shall each consist of five members. Boards (vi) and (vii) shall consist of not less than three and not more than eight members.

Faculty of Law.

One Board of Studies consisting of not less than three and not more than seven members.

Faculty of Medicine.

- (i) Anatomy, Physiology and Materia Medica.
Members of this Board shall be not less than four and not more than six.
- (ii) Medicine, Surgery, Midwifery, Medical Jurisprudence, etc.
Members of this Board shall be not less than seven and not more than ten.

- S. 87.** The members of all Boards of Studies shall be elected every five years in the manner prescribed for the election to authorities other than the Senate laid down in Statutes 169-175, save that the scrutineers shall be appointed in the election of a member of a Board of Studies, by the Dean of the Faculty.
- S. 88.** The office of member of a Board shall be vacated by death, resignation or by the member's being absent from *four* consecutive meetings.
- S. 89.** (a) Each Board shall elect its own President. Each meeting of a Board shall be convened by the President, or in his absence from the Presidency, by the Senior Fellow on the Board.
(b) Not less than one-half of the members shall constitute a quorum.
(c) The President of a Board shall convene a meeting of the Board on the requisition of two members of the Board.
(d) Provided no member of a Board objects to such a course, any item of business before a Board may, at the discretion of the President, be disposed of by correspondence.
- S. 90.** The duties of the Boards shall be to recommend text-books, to recommend courses of study in their respective departments, to advise on all matters relating to their respective departments referred to them by the Syndicate or the Academic Council or the Faculty to which they belong.
- S. 91.** A Board of Studies may bring to the notice of the Academic Council, or the Syndicate, important matters connected with the examinations in its special subject or subjects and may also address the Faculty concerned on any matters connected with the improvement of the courses in its special subject or subjects.
- S. 92.** Any two or more Boards may, and at the request of the Academic Council or the Syndicate shall, meet and act in concurrence and render a joint report upon any matter which lies within the province of both. In such cases the joint meeting shall elect its own President. The quorum of a joint meeting of the Boards must include a full quorum of each Board represented, no member present being counted on more than one separate quorum.
- S. 93.** All meetings of the Board shall be convened through the Registrar, who shall keep a record of the proceedings of the meetings.
(ii) BOARD OF ACCOUNTS.
- S. 94.** A Board of Accounts, consisting of three Ordinary Fellows of the University not being members of the Syndicate or the Academic Council, shall be appointed annually by the Senate at a meeting to be held not later than the 30th June.
- S. 95.** The Board shall meet ordinarily once every three months, and at other times when convened by the Vice-Chancellor.

- S. 96.** The Board shall examine and audit the University Accounts, prepare the Account of the Endowment and Trust Funds ; consider ways and means ; and make recommendations, where necessary, to the Syndicate on all matters relating to the finances of the University.
- S. 97.** A copy of the Budget prepared by the Syndicate shall be sent to all members of the Senate in the month of April every year and the consideration of the Budget shall be an item on the Agenda of the next following meeting of the Senate.
- S. 98.** The financial year of the University shall be from 1st July to 30th June.
- S. 99.** (a) Members of the Board shall hold office for the financial year immediately following their election.
 (b) They shall be eligible for re-appointment at the expiration of their office.
 (c) All vacancies on the Board occurring between two Annual Elections shall be filled up by persons appointed by the Syndicate.

B. THE OFFICERS OF THE UNIVERSITY.

CHAPTER VII.—THE CHANCELLOR.

Ex-officio.

[*Vide* SECTION 9 OF THE ACT.]

Powers of the Chancellor.

Act. [*Vide* Sections, 5 (Inspection of the University) ; 10 (appointment of Vice-Chancellor) ; 13 (B) (nomination of Fellows) ; 14 (2) (appointment of an acting Vice-Chancellor) ; 15(2) (declaring a Fellow's place vacant) ; 30 (confirmation of the conferment of Honorary Degrees) ; 31(1) (confirmation of the cancellation of degrees, etc.) ; 34(2) (giving sanction to Statutes passed by the Senate) ; 43(1) (nomination of Honorary Fellows for life) ; 47 (Interpretation in cases of doubt re : any provision in the Act).]

CHAPTER VIII.—THE VICE-CHANCELLOR.

Appointment and Term of Office.

[*Vide* SECTION 10 OF THE ACT.]

Powers of the Vice-Chancellor.

Act. *Vide* Sections, 11, 13(2), 20(4) and 23(2) (deciding election questions) ; 35(3) (suspending the operation of an Ordinance) ; 36(4) (suspending the operation of a Regulation) ; 45(1) and 46(1) (dividing the first Fellows and first Syndics into Groups.)

- S. 100.** Whenever any emergency arises and there is not time to convene a meeting of any authority, the Vice-Chancellor may take such immediate action as he deems necessary, and shall report the circumstances to the next meeting of the authority concerned for confirmation of such action.

CHAPTER IX.—THE REGISTRAR.

- S. 101.** The Registrar shall be appointed by the Syndicate. In case of necessity, the Vice-Chancellor is empowered to provide for the performance of the duties of the Registrar.

- S. 102.** The term of office of the Registrar shall be two years.

- S. 103.** The duties of the Registrar shall be as follows :—
- (a) To be the custodian of the records, Library, Common Seal, and such other property of the University as the Syndicate shall commit to his charge.
 - (b) To act as Secretary to the Syndicate and to attend all meetings of the Senate, Faculties, Syndicate, Academic Council, Board of Postgraduate Studies, Board of Accounts, Boards of Studies and Examiners, and such other Boards or Committees as may be appointed from time to time and to keep minutes thereof.
 - (c) To conduct the official correspondence of the Syndicate.
 - (d) To issue all notices convening meetings of the Senate, Faculties, Syndicate, Academic Council, Board of Postgraduate Studies, Board of Accounts, and Boards of Studies.
 - (e) To perform such other duties as may be, from time to time, prescribed by the Syndicate and generally to render such assistance as may be desired by the Vice-Chancellor in the performance of his official duties.
- S. 104.** The salary of the Registrar shall be fixed by the Syndicate at a sum not exceeding Rs. 1,000 per mensem.
- S. 105.** Leave of absence may be granted to the Registrar by the Syndicate for a period not exceeding two months for any one term of office, or six months in all, on such terms as to salary as the Syndicate may think proper.
- S. 106.** During the absence of the Registrar on leave, an Acting Registrar may be appointed by the Syndicate who shall be paid at such rate, not exceeding the salary of the Registrar, as the Syndicate may determine.
- S. 107.** If the Registrar shall overstay his leave, his appointment shall become vacant.

CHAPTER X.—VACATING OF OFFICES.

Act
Proviso to
Section 13. Every person elected under any of the entries (i), (ii) and (iii) [of Section 13(1) II A] shall hold the office of a Fellow only so long as he occupies the office or comes under the designation which entitled him to be so elected.

Act
Section 14. If any person being Chancellor, Vice-Chancellor, or Fellow of the said University shall leave India without the intention of returning thereto, his office shall thereupon become vacant.

Act
Section 15. (1) Any Ordinary Fellow may, by letter addressed to the Chancellor, resign his office and on the acceptance of the resignation the office shall become vacant.

(2) If, for a period of twelve consecutive months, any Ordinary Fellow, except a Fellow for life, has not attended a meeting of the Senate, other than a Convocation, the Chancellor may declare his office to be vacant.

(3) Any person, who holds any office in the University by virtue of his being a Fellow, shall cease to hold such office on his ceasing to be a Fellow.

Act
Section 16. An Ordinary Fellow who has vacated his office may, subject to the provisions of this Act, be elected or nominated to be an Ordinary Fellow.

Act
Section 17. The Local Government may, on the recommendation of the Senate supported by at least two-thirds of the whole number of Fellows, cancel the appointment of any person appointed or elected a Fellow of the University. As soon as such order is notified in the *Bombay Government Gazette*, the person so appointed or elected shall cease to be a Fellow ; and he shall not be eligible for re-appointment or re-election until the disqualification has been removed by the Local Government by a notification in the *Bombay Government Gazette*.

C. GENERAL PROVISIONS.

CHAPTER XI.—ADMISSION TO THE UNIVERSITY.

Act
Section 6. No person shall be excluded from membership of any of the authorities of the University or from admission to any degree or course of study on the sole ground of sex, race, creed or class, and it shall not be lawful for the University to adopt or impose on any person any test whatsoever relating to religious belief or profession in order to entitle him to be admitted thereto as a teacher or student or to hold any office therein or to graduate thereat or to enjoy or exercise any privileges thereof except where, in respect of any particular benefaction accepted by the University, such test is made a condition thereof.

S. 108. Every candidate for admission as a student of the University shall pass such entrance or Matriculation Examination or fulfil such other tests of fitness to be admitted as a student as may be from time to time prescribed by Ordinances and Statutes.

CHAPTER XII.—ADMISSION OF STUDENTS FROM OTHER UNIVERSITIES.

O. 82. A student from another University seeking admission to this University shall apply to the Registrar of this University for a certificate of eligibility and shall at the same time pay a fee of Rs. 20. No student from another University shall be admitted to any Institution maintained by or affiliated to the University, except on production of a certificate of eligibility, signed by the Registrar of this University, in the following form :—

Certificate of Eligibility.

Certified that—————having passed the Matriculation or School Leaving Certificate Examination of the—————University or having passed the—————Examination of—————University in the year 19—————after completing the prescribed courses of instruction at—————College which is a College maintained by or affiliated to that University, is eligible for admission to the—————class in this University.

CHAPTER XIII.—UNIVERSITY TERMS.

O. 83. The University year for the Faculties of Arts, Science and Law shall be divided into two terms and that for the Faculty of Medicine into three terms.

O. 84. The following is the arrangement of terms in each of the Faculties from the 1st of June 1929 :—

Faculty.	First Term.		Second Term.		Third Term.	
	Date of Commencement.	Date of Conclusion.	Date of Commencement.	Date of Conclusion.	Date of Commencement.	Date of Conclusion.
Arts	First Saturday after June 14.	First Friday after October 6.	First Saturday after November 4.	First Friday after March 6.	...	...
Science (Science Students).	Do.	Do.	Do.	Do.	...	...
Science (Engineering students).	Do.	Do.	Do.	Do.	...	...
Law	Do.	Do.	Do.	Do.	...	...
Science (Agricultural Students).	10th June.	30th September.	1st November.	20th February.	...	...
Medicine	4th June.	26th August.	24th September.	16th December.	14th January.	7th April.

O. 85. Notwithstanding anything contained in Ordinance 87 the Syndicate shall have the power, whenever they consider it necessary to do so, to shift a College vacation by a period not exceeding two weeks without in any way altering the period of its duration. In such cases, the period added to either term shall be regarded for the purposes of Ordinance 87 as part of the other term which has been reduced.

O. 86. Terms can be kept only by matriculated students who shall attend for a prescribed number of days at one or more of the Colleges or Institutions recognized by the University.

O. 87. The following shall be the number of days' attendance necessary for keeping terms :—

Faculty	First Term	Second Term
Arts (Arts students)	65	65
Science (Science students)	65	65
Science (Engineering students)	60	60
Science (Agricultural students)	70	70
Arts (Commerce students)	Three-fourths of the days on which lectures are delivered.	Three-fourths of the days on which lectures are delivered.
Law	Do.	Do.

- 0. 88.** When a student, on account of *bona fide* illness, or any other reason which the Syndicate may deem sufficient, has attended less than 65 days but not less than 55 days in any one term of an academic year, he may, at the discretion of the Principal of his College, be allowed to count both terms, provided that his total attendances throughout the same year amount to the total required for both terms under Ordinance 87.
- 0. 89.** For all Colleges in any town that may, in the judgment of the Syndicate, be affected with plague or any other epidemic disease, the operation of Ordinance 87 is suspended as regards the number of days' attendance to be required during any University term, and such attendance is at the discretion of the authorities of the institution to which each student belongs.
- 0. 90.** The Principals of Colleges are empowered to excuse attendance to students who, having volunteered under the Indian Auxiliary and Territorial Forces Acts, are unable to attend College during the period they are under training or engaged in other military duties.
- 0. 91.** The Principals and Heads of Institutions shall keep a register of the daily attendance of matriculated students.
- 0. 92.** To keep a term at a College or recognized Institution, an Undergraduate must complete to the satisfaction of the Principal or the Head of the Institution the course of study at the College or Institution prescribed for such term for the Class to which such Undergraduate then belongs.

CHAPTER XIV.—TRANSFERENCE CERTIFICATE.

[UNDER SECTION 35(o) OF THE ACT.]

- 0. 93.** No student shall at any time be admitted to another College unless he produces from the College he leaves—
- (i) a certificate (called Transference Certificate), showing—
 - (a) the number of days kept at the College which the student has left in all the terms during which he attended the College after passing his last University examination ;
 - (b) the number of College examinations he did and did not attend with the result of each examination, since the last University examination that he passed ;
 - (c)* that he has written exercises in English Composition in class to the satisfaction of his teacher ;
 - (d) that he has no books in his possession belonging to the College he has left ;
 - (e) that nothing is owing by him for College dues ;
 - (f) that he bears a good moral character ;
 - (g) his date of birth as entered in the School Register ;
 - (h)* the voluntary subject or group of subjects in which he has attended courses of instruction at the College ;
 - (i)* his honours group if he is a student of the B. A. Honours class or his principal subject if he is a student of the B.Sc. class.

*To be struck out where it is not applicable.

(ii) in the case of a First Year student his laboratory journal certified by the Head of the College he is leaving, to be a record of work actually done by the student.

O. 94. In no case except as provided in Ordinance 97 shall a Transference Certificate be refused, provided the required entries therein can be made.

O. 95. In all questions arising out of clause (f) in Certificate the decision of the Syndicate shall be final.

O. 96. The Head of every affiliated College is empowered to levy a fee of Rupee one when a student does not apply for a Transference Certificate within one month after the commencement of the term following the date on which he left the College.

O. 97. If, as the result of a student leaving one College to join another, it will be necessary for him to count the attendances kept in more than one College to enable him to make up the necessary number of attendances, for his first year in the case of a first year student or for the term in the case of any other student, a Transference Certificate shall not be granted except—

- (i) in case the parent or guardian with whom the student has been residing is transferred to another district;
- (ii) when a change of air for the improvement of the student's health has been recommended by a recognized Medical Practitioner;
- (iii) for other reasons* which appear to the Syndicate to be sufficient.

O. 98. Application for Transference Certificates shall be made by students without unnecessary delay through the Principal of the College to which they wish to be transferred.

CHAPTER XV.—INSPECTION OF COLLEGES.

[UNDER SECTION 35 (r) OF THE ACT.]

O. 99. The Syndicate shall cause every affiliated College to be inspected from time to time by one or more competent persons authorized by the Syndicate in this behalf.

O. 100. An inspection of every affiliated College shall be held under Section 41, sub-section (2) of the Act, at least once in three years and at other times when, in the judgment of the Syndicate, special reasons exist in the case of any College for such inspection.

O. 101. The inspection will be directed primarily to the purpose of ascertaining if the main conditions of affiliation are maintained or not, and of seeing that adequate measures are taken to ensure efficiency.

O. 102. If the report submitted by the persons deputed to inspect calls for any action by the Syndicate, the Syndicate shall, after full inquiry, specify definitely the point or points in which it considers the College deficient and fix a time to be extended (upon good cause shown) within which the College shall take the action necessary to rectify the deficiencies pointed out.

* The Syndicate have ruled that when a town in which a College is situated is declared infected with plague or other epidemic disease, a student who desires to join another College may do so under the provisions of this clause.

CHAPTER XVI.—RETURNS.

[UNDER SECTION 35 (r) OF THE ACT.]

O. 103. Every College shall submit annually by the 1st October to the Syndicate the following returns in the forms prescribed in the University Calendar :—

- (a) A Return of the teaching staff.
- (b) Return of Finances, giving the accounts for the preceding Government financial year.
- (c) Return of the number of students attending the College.

CHAPTER XVII.—REGISTERS.

[UNDER SECTION 35 (s) OF THE ACT.]

O. 104. Every College shall maintain—

- (a) a Register giving, for every student who has been admitted to the College, the date of admission, date of birth, name of birth-place, attendance at College examinations and results of such examinations, and a record of University career and the date of withdrawal ;
- (b) a Register of daily attendance of each student.

CHAPTER XVIII.—HOSTELS AND THEIR RECOGNITION.

[UNDER SECTION 35 (d) OF THE ACT.]

O. 105. Every Hostel maintained or managed by the University or by a College affiliated to the University shall, *ipso facto*, be a recognized Hostel.

O. 106. Any person or a body of persons managing or maintaining a Hostel desirous of having it recognized by the University shall apply to the Syndicate for recognition with the following particulars :—

- (i) The locality of the Hostel and its surroundings.
- (ii) The capacity of the Hostel and the approximate floor-space provided for each inmate.
- (iii) The number of students expected to be put in each room.
- (iv) Arrangements made for water supply, lighting, sanitation, medical help, etc., in the Hostel.
- (v) Arrangements made for the boarding and for outdoor and indoor games.
- (vi) Arrangements made for the inspection of the kitchen, for the superintendence over the inmates, and for the management of the Hostel.
- (vii) The financial statement relating to the Hostel.

O. 107. On receipt of an application, the Syndicate, after any further inquiry which it may deem necessary, shall decide as to whether or

not the recognition is to be granted. Provisional recognition may, however, be granted by the Syndicate on such conditions as it may deem necessary.

- O. 108. The Syndicate may suspend or withdraw the recognition granted to a Hostel managed by a person or body of persons which is not conducted according to the conditions of recognition: Provided that no action shall be taken without giving the management of the Hostel concerned an opportunity of making such representation in the matter as it may desire to make.
- O. 109. The Syndicate may hold periodical inspection of all hostels by persons appointed for the purpose.
- O. 110. The management of every Hostel shall submit to the Syndicate at the end of every term a report of the working of the Hostel for the term.

CHAPTER XIX.—RESIDENCE OF STUDENTS.

[UNDER SECTION 35 (f) OF THE ACT.]

- O. 111. Each College shall provide residential quarters for such a percentage of its students as the Syndicate may from time to time decide and shall make arrangements for the supervision over the rest of the students who do not live with their guardians or parents.
- O. 112. Students who do not live in recognized Hostels or with their parents or guardians shall live in lodgings approved by the authorities of the College to which they belong, and shall be subject to the control of the authorities of the College appointed for the purpose.

CHAPTER XX.—PRECEDENCE.

- S. 109. The Chancellor, the Vice-Chancellor, the Director of Public Instruction, the Deans of the Faculties of Arts, Science, Law and Medicine, the Syndics, and Fellows of the University, shall have seniority and precedence, first in the order above specified down to the Syndics, and, secondly, according to their official precedence in the case of *ex-officio* Fellows, and, thirdly, in the case of other Fellows, according to the sequence of their original appointments.

CHAPTER XXI.—CONVOCATION.

- S. 110. A convocation for conferring Degrees shall be held ordinarily on the third Tuesday in August, and on such other graduation day as may be appointed by the Chancellor or the Vice-Chancellor.

CHAPTER XXII.—CONFERMENT OF DEGREES, ETC.

[UNDER SECTION 29 OF THE ACT.]

- S. 111. The Senate shall confer upon persons who have fulfilled the requirements of the Act, Statutes, Ordinances and Regulations for the time being in force such Degrees and award such Diplomas as are provided for in Statute 112.
- S. 112. The Senate will, on the motion of the Dean of each Faculty, or in his absence, the Senior Member of the Faculty, respectively pass the necessary graces in that behalf; the persons so approved shall be

presented to the Chancellor or the Vice-Chancellor successively in the following order :—

Bachelor of Agriculture,
 Bachelor of Commerce,
 Bachelor of Engineering,
 Bachelor of Medicine and Surgery,
 Bachelor of Science,
 Bachelor of Arts,
 Bachelor of Teaching,
 Bachelor of Hygiene,
 Diploma in Ophthalmology,
 Bachelor of Laws,
 Master in Agriculture,
 Master of Commerce,
 Master of Engineering,
 Master of Science,
 Master of Arts,
 Doctor of Hygiene,
 Master of Laws,
 Doctor of Medicine,
 Master of Surgery.

S. 113. In special cases, and at the discretion of the Syndicate, candidates who have passed the examinations may be permitted to take their Degree *in absentia*.

O. 113. Every person who passes an examination for a degree or a diploma of the University shall be eligible, on payment of a fee of Rs. 10 or 20, to be admitted to the respective Degree in person or *in absentia* respectively and in testimony thereof a diploma shall be awarded to him.

CHAPTER XXIII.—ACADEMIC COSTUME.

O. 114. Academic Costume is worn at Convocations for conferring Degrees.

O. 115. Such of the Fellows of the University of Bombay as are graduates of other Universities, or as are entitled to wear official costume or uniform, may appear in the academic dress of their own Universities, or in such costume or uniform, wearing in addition the Fellow's Scarf of the University of Bombay.

O. 116. Other Fellows shall wear the Fellow's Gown and Scarf of the University of Bombay. The head-dress of the European Fellows is a College Cap.

Academic Costume to be worn by the Senate and Graduates of the University of Bombay.

CHANCELLOR.

GOWN.—Black damask silk with gold lace and tufts.

CAP.—Black velvet Academic Cap with gold tassel.

VICE-CHANCELLOR.

GOWN.—The same, but with silver lace and tufts.

CAP.—The same, but with silver tassel.

REGISTRAR.

GOWN.—The same, but with black silk lace and tufts.

CAP.—Black cloth Academic Cap, with black silk tassel.

FELLOWS.

GOWN.—Bishop's purple silk, with full sleeves.

SCARF.—Of the same colour, with goldfringed ends.

GRADUATES.

B. A.

GOWN.—Black silk or stuff, shape as Oxford B. A.

HOOD.—Black silk, bound with garter blue silk, one inch wide.

M. A.

GOWN.—Black silk or stuff, as Oxford M. A.

HOOD.—Garter blue silk, lined the same.

B. COM.

GOWN.—Black silk or stuff, shape as Oxford B. A.

HOOD.—Black silk, bound with violet silk, one inch wide.

M. COM.

GOWN.—Black silk or stuff, as Oxford M. A.

HOOD.—Black silk, lined with violet silk.

B. T.

GOWN.—Black silk or stuff, shape as B. A.

HOOD.—Black silk bound with rose coloured silk, two inches wide.

B. SC.

GOWN.—Black silk or stuff, shape as Oxford B. A.

HOOD.—Black silk bound with yellow silk, one inch wide.

M. SC.

GOWN.—Black silk or stuff, as Oxford M. A.

HOOD.—Black silk, lined with yellow silk.

B. Ag.

GOWN.—Black silk or stuff, shape as B. A.

HOOD.—Black silk, bound with green silk, one inch wide.

M. Ag.

GOWN.—Black silk or stuff, as Oxford M. A.

HOOD.—Black silk, lined with green silk.

B. E.

GOWN.—Black silk or stuff, shape as B.A.

HOOD.—Black silk, bound with brown silk, one inch wide.

M. E.

GOWN.—Black silk or stuff, as M.A.

HOOD.—Brown silk, lined garter blue.

LL. B.

GOWN.—Black silk or stuff, as M.A.

HOOD.—Black silk with scarlet cloth band inside, two inches wide, shape as Cambridge M.A.

LL. M.

GOWN.—Black silk or stuff, as M.A.

HOOD.—Scarlet cloth lined with scarlet silk, shape as Cambridge M.A.

M. B., B. S. AND D. O.

GOWN.—Black silk or stuff, as B.A.

HOOD.—Black silk, lined with crimson silk.

B. Hy.

GOWN.—Black silk or stuff, as B.A.

HOOD.—Black silk, lined with white silk, one inch wide.

D. Hy.

GOWN.—*Undress*, black silk or stuff, as M.A.

Full dress, crimson silk, white silk facings, shape as M.A.

HOOD.—Crimson silk, lined with white silk.

M. D. AND M. S.

GOWN.—*Undress*, black silk or stuff, as M.A.

Full dress, crimson silk, garter blue facings, shape as M.A.

HOOD.—Crimson silk, lined garter blue.

HONORARY DEGREE OF LL. D.

GOWN.—Crimson silk, with white cloth facings, as Oxford M.A.

HOOD.—Scarlet silk, lined with white silk.

CAP.—For all European Fellows or Graduates—

Black cloth Academic Cap with black silk tassel.

CHAPTER XXIV.—REGISTRATION OF GRADUATES.

S. 114. A graduate who has (a) taken the degree of Doctor or Master in any Faculty or (b) graduated in any Faculty not less than ten years before registration will, subject to the payment of an initial fee of Rs. 5, be entitled to have his name entered on the Register of Graduates within one year from the date on which he is entitled and will be entitled to vote at the election of Fellows.

S. 115. The name of a graduate entered on the Register shall, subject to the payment of an annual fee of Rs. 2, be retained thereon, and in the case of default of such payment within one month after demand made, shall be removed therefrom, but shall at any time be re-entered on

payment of all the arrears : Provided that a graduate whose name is on the Register may, at any time, compound for all subsequent payments of the annual fee by paying a sum of Rs. 10.

- S. 116.** If the application for such enrolment is made after the expiry of the period mentioned in Statute 114, the applicant shall be entitled to have his name entered on the Register on payment of the said initial fee of Rs. 5 and of a further sum of Rs. 2 in addition to the said annual fee of Rs. 2 for the year in which he applies for registration.
- S. 117.** The year for the purposes of Statutes 114 and 116 shall run, in the case of persons holding a Master's or Doctor's Degree, from the date of their first admission to such degree, and, in the case of persons holding a Degree of Bachelor or Licentiate, ten years after the date of their first admission to such degree.
- S. 118.** Graduates wishing to have their names registered shall fill in a printed form to be supplied on application to the Registrar.
- S. 119.** Registered graduates shall notify to the Registrar every change of their address.

CHAPTER XXV.—PROVIDENT FUND.

[UNDER SECTION 50 OF THE ACT.]

- S. 120.** Every whole-time officer, teacher or other servant of the University other than one whose services have been lent to the University by Government, appointed on or after the 1st of April, 1925, to a substantive appointment, carrying a salary of rupees* thirty per mensem or upwards, shall, as a condition of his service, become a depositor in the University Provident Fund.
- S. 121.** Subscriptions to the Fund shall be six and a quarter per cent. on the salary of the depositor. Such subscription shall be deducted monthly from the salary of the depositor, and the amount so deducted shall be paid to the University Fund, to the credit of the depositor. An officer, teacher or other servant on leave on full pay shall continue to pay his subscription to the Provident Fund, and may continue to do so at his option if on leave on less than full pay. At the end of every month the University shall, in the case of each subscriber, make a contribution at the rate of six and a quarter per cent. on his salary, and this amount shall be placed to the credit of the depositor.

Provided as follows :—

- (a) No officer, teacher or other servant whose services shall have been dispensed with for what, in the opinion of the Syndicate, is misconduct shall be entitled to the benefit of any sum or sums contributed by the University to the Fund or any interest or other profit thereof ; and
- (b) The University shall be entitled to recover as a first charge from the amount at the time being at the credit of any officer, teacher or other servant, a sum equal to the amount of loss or damage at any time sustained by the University by reason of his misconduct or negligence.

- S. 122.** Subject to the provisos to Statute 121, a depositor shall be entitled, upon quitting the service of the University, to draw out and receive the whole amount standing to his credit in the Fund : Provided that no depositor shall be entitled to receive any sum or sums contributed by the University, or any part thereof, unless he has been in the service of the University for at least three years and has been permitted to resign his appointment.
- S. 123.** In the case of illness of a depositor or any member of his family, the Syndicate may advance to the depositor one-fourth of the sum to his credit at the time, subject to such conditions regarding repayment as the Syndicate may deem fit to impose.
- S. 124.** A depositor may, from time to time, make declaration in the form prescribed stating the name or names of the person or persons to whom he desires to be paid at his death the amount standing to his credit in the Fund, and the said amount shall be paid to such person or persons. On such payment being made, the University shall be absolved from all liability in connection therewith.
- S. 125.** The Syndicate may, from time to time, make Ordinances or issue such general or special directions as may be consistent with the above Statutes as to—
- (a) the conduct of the business of the Fund,
 - (b) any matter relating to the Fund, or its management, or the investment of sums at the credit of the Fund, or the privileges of the depositors, not herein expressly provided for or vary or cancel any rules made or direction given by them.
- O. 117.** The amount in hand to the credit of the Fund shall be invested in Government securities or be placed on fixed deposit in the Imperial Bank of India or in the Post Office Savings Bank, according as the Syndicate may direct.
- O. 118.** The Syndicate shall cause to be maintained proper accounts relating to the Fund showing the amount for the time being to the credit of each depositor and the general state of the Fund, in such form as it may from time to time prescribe.
- O. 119.** The interest received by the University on sums so invested shall as soon as received be added to the amounts standing to the credit of the Fund.
- O. 120.** Compound interest at $4\frac{1}{2}$ per cent. per annum credited yearly on 30th June will be allowed on the amount standing to the credit of each depositor on the 30th June and 31st December, respectively, in each year, subject to the right of the Syndicate to revise the rate at any time (after announcing its intention of doing so) owing to a change in the rate of interest in the Government securities or for any other sufficient reason.
- O. 121.** The term 'salary' shall include personal allowances but shall not include any acting or other allowance.
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PART III.—ELECTIONS.

CHAPTER I.—THE ELECTION TO AUTHORITIES.

[UNDER SECTIONS 7, 48 & 33(c) OF THE ACT.]

Act
Section 48.

Every election to any authority of the University under the Act shall be made according to the system of proportional representation by means of the single transferable vote in such manner as may be prescribed by Statutes.

Definitions.

S. 126. Every Professor, Reader and Lecturer giving instruction in any College except a Demonstrator, Fellow, Tutor, or a Lecturer in English Composition, or a person holding an appointment of a similar character shall be deemed to be a "Teacher" within the meaning of Section 3(h) and for all purposes under the Act. [*Vide* Section 13(1) II A(ii).]

S. 127. Except as otherwise expressly provided for, all elections to the authorities will be held in accordance with this Chapter.

S. 128. In this Chapter unless there is anything repugnant in the subject or context—

- (1) The expression "elector" with reference to the election of any authority means any person or a public association or body entitled to vote at such an election.
- (2) The expression "continuing candidate" means any candidate not elected or not excluded from the poll at any given time.
- (3) The expression "first preference" means the figure "1" standing alone opposite the name of a candidate; "second preference" means the figure "2" standing alone opposite the name of a candidate in succession to the figure "1"; "third preference" means the figure "3" standing alone opposite the name of a candidate in succession to the figures "1" and "2"; and so on.
- (4) The expression "next available preference" means a second or subsequent preference recorded in consecutive numerical order for a continuing candidate, the preferences next in order on a voting paper for candidates already elected or excluded from the poll being ignored.
- (5) The expression "transferable paper" means a voting paper on which, following the first preference, a second or subsequent preference is recorded in consecutive numerical order for a continuing candidate.
- (6) The expression "non-transferable paper" means a voting paper on which no second or subsequent preference is recorded for a continuing candidate:

Provided that a paper shall be deemed to have become a non-transferable paper whenever—

- (a) the names of two or more candidates (whether continuing or not) are marked with the same number, and are next in order of preference;

- or*
- (b) the name of the candidate next in order of preference (whether continuing or not), is marked—
- (i) by a number not following consecutively after some other number on the voting paper ;
- or*
- (ii) by two or more numbers ;
- or*
- (c) for any other reason it cannot be determined for which of the continuing candidates the next available preference of the elector is recorded.
- (7) The expression "original vote" in regard to any candidate means a vote derived from a ballot paper on which a first preference is recorded for that candidate.
- (8) The expression "transferred vote" in regard to any candidate means a vote derived from a voting paper on which a second or subsequent preference is recorded for that candidate.
- (9) The expression "surplus" means the number of votes by which the total number of the votes, original and transferred, credited to any candidate, exceeds the quota.
- (10) The expression "count" means—
- (a) all the operations involved in the counting of the first preferences recorded for candidates ;
- or*
- (b) all the operations involved in the transfer of the surplus of an elected candidate ;
- or*
- (c) all the operations involved in the transfer of the votes of an excluded candidate or of two or more candidates excluded together.

S. 129. Subject to Section 47 of the Act, the Vice-Chancellor shall have power—

- (a) to fix the date of election ;
- (b) to decide in cases of doubt the validity or invalidity of a vote recorded and to declare the results of each election.

S. 130. The Vice-Chancellor shall have power to hold elections in anticipation of vacancies about to occur by efflux of time.

S. 131. Except as otherwise provided for in the Act, the Registrar shall be responsible for the conduct of all elections.

S. 132. The Registrar shall maintain an electoral roll for each of the electoral bodies entitled to elect a member to the authorities of the University showing the names, degrees and addresses of all persons, or the names and addresses of all public associations and bodies, as the case may be, qualified to vote.

S. 133. The persons, public associations or bodies, as the case may be, entitled to vote at any election of any of the authorities shall be respectively the persons or public associations or bodies whose names are entered on their respective rolls.

- S. 134.** On the occurrence of a vacancy in any of the authorities—
 (a) the notice of election shall be forwarded to all electors stating the date fixed as the last day for receiving nominations and the date of election ;
 (b) a list of candidates nominated giving in full names, places of abode, and designation, shall be forwarded to every elector at his registered address.
- S. 135.** Any two electors or any two members of a public association or body entitled to a vote as the case may be, may nominate as a candidate any person of lawful age and not subject to any legal incapacity or disqualification, by sending to, or delivering at, the University office a nomination paper before 4 o'clock afternoon, (a) *three* clear weeks before the date of election in the case of the Senate, and (b) *eight* clear days in the case of other authorities.
- S. 136.** In the case of a dispute or doubt, the Vice-Chancellor shall determine whether a person is disqualified under the Statutes or not.
- S. 137.** Nomination papers must be dated and signed by two electors or by two members of the public associations or bodies entitled to vote, as the case may be, and, where possible, must contain the names in full, places of abode and designations, if any, of the two signatories and of the candidate nominated.
- S. 138.** No elector or member of a public association or body entitled to vote shall propose or second the nomination of more persons than may be required to fill up the vacancies.
- S. 139.** If the number of candidates nominated does not exceed the number of vacancies to be filled, the candidates so nominated shall be declared to have been duly elected.
- S. 140.** A voting paper shall be, as far as possible, in the following form :—

VOTING PAPER.
The Bombay University.

Election by.....

Mark order of preference in spaces below.	Names of candidates.

- S. 141.** An elector who has not received his voting paper and other connected papers sent by post or whose papers, before their despatch back to the Registrar, have been inadvertently spoilt in such manner that they cannot be conveniently used or who has lost his papers may, on his transmitting to the Registrar a declaration to that effect signed by himself, require the Registrar to send him new papers in place of those not received, spoilt or lost; and if the papers have been spoilt, the spoilt papers shall be returned to the Registrar who shall cancel them on receipt. In every case when new papers are issued, a mark shall be placed against the number of the elector's name in the Register to denote that new papers have been issued in place of those not received, spoilt or lost.
- S. 142.** All voting papers shall be scrutinized by the Registrar and Ordinary Fellows of the University not more than four in number nominated by the Vice-Chancellor.
- S. 143.** (1) Each elector shall have one transferable vote.
(2) An elector in recording his vote—
(a) must place on his voting paper the figure 1 opposite the name of the candidate for whom he votes; and
(b) may in addition indicate the order of his choice or preference for as many other candidates as he pleases by placing against their respective names the figures 2, 3, 4, 5 and so on, in consecutive numerical order.
- S. 144.** A voting paper is invalid on which—
(a) the figure 1 standing alone, indicating a first preference, is not placed;
or
(b) the figure 1 standing alone, indicating a first preference, is placed opposite the name of more than one candidate;
or
(c) the figure 1 standing alone, indicating a first preference, and some other figure are placed opposite the name of the same candidate;
or
(d) it cannot be determined for which candidate the first preference of the voter is recorded;
or
(e) in an election by ballot any mark is placed by the voter by which he may afterwards be identified.
- S. 145.** After the voting papers for an electoral body have been counted, the Registrar shall examine the voting papers and shall sort them into parcels according to the first preferences recorded for each candidate, rejecting any that are invalid.
- S. 146.** The Registrar shall then count the number of papers in each parcel and shall credit each candidate with a number of votes equal to the number of valid papers on which a first preference has been recorded for such candidate and he shall ascertain the total number of valid papers.

- S. 147.** The Registrar shall then divide the total number of valid papers by a number exceeding by one the number of vacancies to be filled. The result increased by one (any fractional remainder being disregarded) shall be the number of votes sufficient to secure the election of a candidate. This number is herein called the "quota".
- S. 148.** If, at the end of any count, the number of votes credited to a candidate is equal to or greater than the quota, that candidate shall thereupon be elected.
- S. 149.** (1) If, at the end of any count, the number of votes credited to a candidate is greater than the quota, the surplus shall be transferred, as in this Statute provided, to the continuing candidates for whom the next available preferences have been recorded on the voting papers in the parcel or sub-parcel last received by the elected candidate.
- (2) (a) If more than one candidate has a surplus, the largest surplus shall be first dealt with.
- (b) If two or more candidates have each an equal surplus, the surplus of the candidate with the greatest number of votes at the first count at which the candidates in question have an unequal number of votes shall be first dealt with. When the numbers of votes credited to such candidates are equal at all counts, the Registrar shall determine which surplus he will first deal with.
- (3) The Registrar need not transfer a surplus when that surplus, together with any other surplus not transferred, is less than the difference—
- (a) between the votes of the candidate lowest on the poll and the votes of the next highest candidate ;
- or*
- (b) between the total of the votes of the two or more candidates lowest on the poll and the votes of the next highest candidate, provided that the exclusion from the poll of the aforesaid two or more candidates lowest on the poll shall not reduce the number of continuing candidates below the number of vacancies remaining to be filled.
- (4) (a) If the votes credited to an elected candidate consist of original votes only, the Registrar shall examine all the papers contained in the parcel of the elected candidate whose surplus is to be transferred ;
- (b) If the votes credited to an elected candidate consist of original and transferred votes, or of transferred votes only, the Registrar shall examine the papers contained in the sub-parcel last received by the elected candidate whose surplus is to be transferred ;
- (c) In either case the Registrar shall sort the transferable papers into sub-parcels according to the next available preferences recorded thereon, shall make a separate sub-parcel of the non-transferable papers and shall ascertain the number of papers in each sub-parcel of non-transferable papers.

(5) If the total number of papers in the sub-parcels of transferable papers is equal to or less than the surplus, the Registrar shall transfer the whole of each sub-parcel of transferable papers to the continuing candidate indicated thereon as the electors' next available preference, and shall set aside as a separate parcel so many of the non-transferable papers as are not required for the quota of the elected candidate. The particular papers set aside shall be those last filed in the parcel of non-transferable papers.

(6) (a) If the total number of transferable papers is greater than the surplus, the Registrar shall transfer from each sub-parcel of transferable papers to the continuing candidate indicated thereon as the electors' next available preference the number of papers which bears the same proportion to the number of papers in the sub-parcel as the surplus bears to the total number of transferable papers.

(b) The number of papers to be transferred from each sub-parcel shall be ascertained by multiplying the number of papers in the sub-parcel by the surplus and dividing the result by the total number of transferable papers. A note shall be made of the fractional part, if any, of each number so ascertained.

(c) If, owing to the existence of such fractional parts, the number of papers to be transferred is less than the surplus, so many of these fractional parts taken in the order of their magnitude, beginning with the largest, as are necessary to make the total number of papers to be transferred equal to the surplus shall be reckoned as of the value of unity, and the remaining fractional parts shall be ignored.

(d) If two or more fractional parts are of equal magnitude, that fractional part shall be deemed to be the largest which arises from the largest sub-parcel, and if the sub-parcels in question are equal in size, the fractional part credited to the candidate with the greatest number of votes at the first count at which the candidates in question have an unequal number of votes shall be deemed to be the largest. When the numbers of votes credited to such candidates are equal at all counts, the Registrar shall determine which fractional part shall be deemed to be the largest.

(e) The particular papers transferred from each sub-parcel shall be those last filed in the sub-parcel and each paper so transferred shall be marked in such a manner as to indicate the count at which the transfer took place.

S. 150. (1) If, at the end of any count, no candidate has a surplus or if any existing surplus need not be and is not transferred, and one or more vacancies remain to be filled—

(a) the Registrar shall exclude from the poll the candidate lowest on the poll ;

(b) if the total of the votes of the two or more candidates lowest on the poll together with any surplus not transferred is less than the number of votes credited to the next highest candidate, the Registrar may at the same count exclude the aforesaid two or more candidates lowest on the poll, provided that the exclusion of these candidates shall not reduce the number of continuing candidates below the number of vacancies remaining to be filled.

(2) If, when a candidate has to be excluded, two or more candidates have each the same number of votes and are lowest on the poll, the candidate with the lowest number of votes at the first count at which the candidates in question have an unequal number of votes shall be excluded, and, when the numbers of votes credited to these candidates are equal at all counts, the Registrar shall determine which shall be excluded.

(3) Upon the exclusion of any candidate, the Registrar, save as hereinafter provided, shall examine all the papers credited to that candidate; shall sort the transferable papers into sub-parcels according to the next available preferences recorded thereon for continuing candidates; shall transfer each sub-parcel to the candidate for whom that preference is recorded; and shall set aside as a separate sub-parcel the non-transferable papers.

S. 151. (1) If, at the end of any count, the number of elected candidates is equal to the number of vacancies to be filled, no further transfer of votes shall be made.

(2) If, on the exclusion of a candidate or candidates, the number of the then continuing candidates is equal to the number of vacancies unfilled, the continuing candidates shall thereupon be elected, and no further transfer of votes shall be made.

S. 152. The order of priority of election of elected members shall be the order in which they are severally elected. If, at the end of any count, two or more candidates are elected, the order of priority shall be the order of magnitude of the numbers of votes credited to such candidates, beginning with the greatest.

S. 153. (1) Whenever any transfer is made, each sub-parcel of papers transferred shall be placed on the top of the parcel, if any, of papers of the candidate to whom the transfer is made and that candidate shall be credited with a number of votes equal to the number of papers transferred to him.

(2) Non-transferable papers (except such as in the transfer of a surplus may be required for the quota of the elected candidate) shall be set aside as a separate parcel together with any parcel of non-transferable papers already set aside.

(3) On the transfer of the surplus of an elected candidate, all papers not transferred to continuing candidates and not set aside as provided in the preceding paragraph, shall be placed together in one parcel as the quota of the elected candidate and the parcel shall be marked with the name of the elected candidate.

S. 154. After the scrutiny is completed, the Registrar shall forthwith report to the Vice-Chancellor the names of the required number of candidates who have received the highest number of votes.

S. 155. On the result of the election being reported as aforesaid, the voting papers shall be destroyed, and the results of the scrutiny, showing for each candidate the number of first votes obtained and the successive additions to or subtractions from the number till he or she was excluded or elected, shall be published by the Registrar.

CHAPTER II.—ELECTION TO THE SENATE.

[UNDER SECTION 33 (c) OF THE ACT.]

(i) General.

S. 156. The procedure for the election of Ordinary Fellows shall be, as far as possible, the one prescribed in Chapter I, subject, however, to the provisions of this Chapter.

S. 157. The names of persons, public associations or bodies, as the case may be, entitled to vote shall be entered in their respective rolls at least seven clear weeks before the date of election.

S. 158. In the case of election of Ordinary Fellows—

(a) the notice of election shall be forwarded to every elector under Statute 134 of Chapter I and also shall be published in the *Bombay Government Gazette* at least five clear weeks before the date of election;

(b) the list of nominations shall be forwarded to the electors as provided for by Statute 134 of Chapter I and shall also be published in the *Bombay Government Gazette* at least 15 clear days before the date of election.

S. 159. (a) The voting paper for the election of Fellows on the Senate shall be signed by the elector or the president of the public association or the body entitled to vote and shall be attested by a Magistrate, a Justice of the Peace, a Judicial or Political Officer, a Gazetted Officer of Government, or a member of the Senate of the University of Bombay for the time being.

(b) The voting paper for electors residing in Indian States may be filled up in the presence of an officer in the Political Department in the British service not lower in rank than a Thanadar exercising magisterial powers or they may be filled in the presence of a Magistrate of an Indian State whose signature should be authenticated by the counter signature of the Chief or the Karbhari or the Chief Judge of the Indian State or of a Political Officer not lower in rank than an Assistant Political Agent or Deputy Political Agent.

S. 160. The names of the elected candidates shall be published in the *Bombay Government Gazette*.

S. 161. (a) If any candidate is elected to the Senate by more than one constituency, he shall, by notice in writing, signed by him and delivered to the Registrar of the University within 15 days of the publication in

the *Gazette* of the result of the last of such elections, choose which of these constituencies he shall represent, and such choice shall be conclusive.

(b) When any such choice has been made, the Vice-Chancellor shall direct the Registrar to take steps for holding an election in the constituency in which a vacancy has occurred by reason of such choice.

(c) If the candidate does not make the choice referred to herein within the specified period of time, the Vice-Chancellor shall decide which constituency he will represent and his decision shall be final. The Vice-Chancellor shall thereupon direct the Registrar to take steps for holding an election in the constituency in which a vacancy has occurred in virtue of such decision.

(ii) Election of Fellows by Public Associations and Bodies.

S. 162. The Registrar shall notify to the several public associations and bodies referred to in Section 13 II (A) (iv) (a), (b), (c), (d), (e), and (vii) of the Act, requesting them to elect their representative to be a Fellow of the University. Within five weeks of such notification, or in its next sittings whichever is the later, such election shall be held by the respective associations and bodies under rules to be made by them in this behalf and on the election being held, the said associations and bodies shall each of them make a return to the University intimating the names, degrees and addresses of the persons so elected by them.

(iii) Election of Ordinary Fellows by Registered Graduates.

S. 163. All graduates of the University of Bombay whose names are entered on the Register of Graduates under Statute 114 or 116 pp. 55-56 at least seven clear weeks before the date of election, shall be entitled to vote or to be elected at such election and shall be the only persons so entitled.

S. 164. In the event of any omission or mistake in such Roll (Register) being discovered, the Registrar is authorized duly to rectify the said Roll.

O. 122. Printed copies of the Roll shall be delivered to any person requiring the same on payment of a fee of Rs. 2 per copy.

(iv) Election of Ordinary Fellows by Faculties.

S. 165. The Faculties hereinafter mentioned will be entitled to elect the number of Ordinary Fellows respectively set against their names :

(1) Arts	...	...	...	...	...	...	...	3
(2) Science...	...	...	...	...	...	...	...	3
(3) Medicine	...	...	...	...	...	...	...	2
(4) Law	...	...	...	...	...	...	...	2

S. 166. All the members of the Faculty shall be entitled to vote at this election and shall be the only persons entitled to vote thereat.

(v) Donor-Fellows.

[UNDER SECTION 13, II (C) AND (D) OF THE ACT.]

- S. 167.** The University will maintain a list of persons entitled to serve as Fellows of the University under clause II (C) of Section 13 of the Act. The Registrar shall notify to the person so entitled requesting him to intimate to the University within ten days of the receipt of such notification from the Registrar whether he intends to serve as a Fellow of the University and on receipt of such intimation by the Registrar, the person so entitled shall be a Fellow of the University for life.
- S. 168.** The Registrar shall notify the body or bodies referred to in Section 13 II (D) of the Act, requesting them to intimate to the University, within 15 days of the receipt of such notification from the Registrar, the names, degrees and addresses of their nominees to serve as Fellows of the University and on receipt of such intimation by the Registrar, the person so nominated shall be a Fellow of the University for a period of five years.

CHAPTER III.—ELECTION TO AUTHORITIES
OTHER THAN THE SENATE.

[UNDER SECTION 33 (c) OF THE ACT.]

- S. 169.** In the case of election to authorities other than the Senate, the Vice-Chancellor, or in his absence from the Bombay Presidency, the Senior Fellow in the Senate shall direct the Registrar to take steps for the election.
- S. 170.** *Seven* clear days before the date fixed by the Registrar as the last day for receiving nominations, the Registrar shall send to every elector a notice of the date of election.
- S. 171.** The voting at all elections shall be by ballot.
- S. 172.** All elections shall be by the issue by the University of voting papers by post.
- S. 173.** In the cases referred to in Statute 172, hereof, the Registrar shall send to each elector a voting paper, an addressed envelope for the same and a certificate of identity to be signed by the elector. The elector shall forward his voting paper unsigned in the envelope provided, under seal, enclosed in a cover containing also the signed certificate of identity, to the Registrar, so that it shall arrive not later than the time fixed for the election to take place. The Registrar shall then check the qualification of the elector, and, if correct, shall place the sealed envelope containing the voting paper in a box with others for the inspection of the scrutineers.
- S. 174.** Save as hereinafter provided, the procedure for the election of members of the authorities shall be, as far as possible, in accordance with the procedure prescribed by Chapter I hereof.
- S. 175.** The candidates whose names are reported by the Registrar to the Vice-Chancellor under Statute 154 of Chapter I shall be deemed to have been duly elected.

CHAPTER IV.—ELECTION OF A MUNICIPAL
COUNCILLOR BY FELLOWS RESIDENT
IN BOMBAY.

- S. 176.** *Ten* clear days before the day fixed for the election, the Registrar shall issue to all Fellows, both Ordinary and Honorary, residing in the city of Bombay a notification stating the date of the election.
- S. 177.** No candidate shall be entered on the list of nominations unless a proposition for his nomination in writing, signed by the proposer and seconder, who shall both be Fellows, entitled to vote at the election, shall have been handed in to the University Office *four* clear days before the day fixed for the election.
- S. 178.** In the event of there being only one candidate nominated, the candidate so nominated shall be declared elected. In the event of the number of candidates nominated exceeding one, the Registrar shall, on the following day, issue to each Fellow on the Fellows' Electoral Roll a copy of the list of nominations.
- S. 179.** The election shall take place at the Sir Cowasji Jehangir Hall of the University between the hours of 4 and 6 P. M. on the day fixed and shall be conducted by the Registrar.
- S. 180.** The election shall be by ballot by means of voting papers, which shall be delivered personally by the electors to the Registrar at the time and place aforesaid.
- S. 181.** Each elector shall be entitled to one vote and shall not give more than one vote for one person. In the event of an elector having given more than one vote for any one person, then he shall be deemed to have given one vote for the person for whom he has voted, but in the event of his having voted for more persons than one, then his voting paper shall be cancelled.
- S. 182.** Immediately after 6 P. M. on the day of election all the voting papers shall be scrutinized by the Registrar and any two persons nominated by the Syndicate and they shall ascertain the number of valid votes given for each candidate. The candidate with the highest number of votes shall be returned by the Registrar as elected.
- S. 183.** If an equality of votes is found on such scrutiny to exist between any two or more candidates and the addition of a vote would entitle any of those candidates to be declared elected, the determination of the candidate to whom such one additional vote shall be deemed to have been given shall be made by lot to be drawn by the Registrar in such manner as he shall then and there determine.
- S. 184.** The decision of the Registrar after such scrutiny and ballot (if any) as to the candidate who is to be returned as duly elected shall be final ; and on the result of the election being so ascertained as aforesaid the voting papers shall be destroyed.
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PART IV—RECOGNITION AND AFFILIATION.

CHAPTER I.—RECOGNIZED UNIVERSITIES.

- O. 123.** The Universities recognized are the Universities of Great Britain and Ireland, of India* and the Hong-Kong University in all the Faculties in which Degrees are granted by them respectively.

CHAPTER II.—AFFILIATED COLLEGES.

The following are the affiliated Colleges falling in the various groups specified in Section 13 of the Act.

Gujarat Group.

(a) British India.

- O. 124.**
1. Gujarat College and Madhavlal Ranchhodlal Science Institute, Ahmedabad (1879).—*In Arts for the purposes of the Examinations for the B. A. Degree ; in Science for the Intermediate Science Examination in groups of "Mathematics, Physics and Chemistry" and "Physics, Chemistry and Biology" and for the B.Sc. Examination in groups of "Physics and Chemistry," "Mathematics and Physics" and "Chemistry and Botany" and "Botany (Principal) and Zoology (Subsidiary)."*
 2. Maganlal Thakordas Balmukundas College, Surat (1918).—*In Arts, as a First Grade College teaching up to the standard of the Pass Examination for the B. A. Degree in English, Sanskrit, Persian, Gujarati, Arabic, History and Economics, Philosophy, and Mathematics and up to that of the Honours Examination in English, Sanskrit, Arabic, History and Economics only, subject to a maximum of 200 first year, 100 second year, 60 third year and 75 fourth year, students. In Science for the Intermediate Science Examination in Group A subject to a maximum of 60 students.*
 3. Sir Lallubhai Shah Law College, Ahmedabad (1927).—*In Law as a full grade College provisionally for a period of five years from June 1930.*

(b) Indian States.

- S. 185.**
4. Baroda College (1881).—*In Arts, excluding the B. Com. and B. T. Degrees ; in Science for the purposes of the Examinations leading up to the B. Sc. Degree.*
 5. Bahauddin College, Junagadh (1901).—*In Arts, excluding the B. Com. and B. T. Degrees.*
 6. Samaldas College, Bhavnagar (1885).—*In Arts, for the purposes of the Examinations leading up to the B. A. Degree.*

* By the expression " Universities of India " is meant all the statutory Indian Universities and the University of Mysore. The following is a list of statutory Universities in India :—Calcutta, Bombay, Madras, Punjab, Allahabad, Benares (Hindu), Patna, Dacca, Aligarh (Muslim), Rangoon, Lucknow, Delhi, Nagpur, Andhra, Agra, and Annamalai.

Konkan Group.**O. 125.**

1. Elphinstone College, Bombay (1860).—*In Arts, excluding the B. Com. and B. T. Degrees.*
2. Wilson College, Bombay (1861).—*In Arts, excluding the B. Com. and B. T. Degrees ; in Science for the purposes of the Examinations leading up to the B.Sc. Degree.*
3. St. Xavier's College, Bombay (1869).—*In Arts, excluding the B. Com. and B. T. Degrees ; in Science for the purposes of the Examinations leading up to the B. Sc. Degree.*
4. Hansraj Pragji Thackersey Arts College, Nasik (1924).—*In Arts provisionally up to the 31st May 1931 as a First Grade College teaching up to the standard of the B. A. Degree for both Pass and Honours courses in English, Sanskrit, History and Economics, and Philosophy and for the Pass course in Marathi. The College is authorized to admit a maximum of 125 first year students, 75 second year students and 80 third and fourth year students taken together.*
5. Secondary Training College, Bombay (1922).—*In Arts for the Examination for the Degree of Bachelor of Teaching.*
6. Sydenham College of Commerce and Economics, Bombay (1914).—*In Arts for the purposes of all Examinations in Commerce.*
7. Royal Institute of Science, Bombay (1926).—*In Science for the purposes of the Examinations leading up to the B. Sc. Degree provisionally for a period of five years from June 1926 and subject to a maximum of 80, 85 and 85 students respectively in the Intermediate Science, Junior B. Sc. and Senior B. Sc. classes.*
8. Government Law College, Bombay (1860).—*In Law.*
9. Grant Medical College, Bombay (1860).—*In Medicine and in Science for the purposes of the Final B. Sc. Examination only.*
10. Seth Gordhandas Sunderdas Medical College, Bombay (1925).—*In Medicine, for the purposes of all the Examinations for the M. B., B. S. Degrees, and also for Postgraduate Medical Degrees, and Diplomas, subject to the following conditions :—*
 - (1) *The number of fresh students to be admitted to the First Year class should not exceed 60 annually.*
 - (2) *The total number of regular students attending the Final M.B., B.S. classes should not exceed 120 at any time.*

And also for the B.Sc. course in Animal Physiology (Principal and Subsidiary), Microbiology [Principal with Group III (2) and Subsidiary], and in Human Anatomy and Embryology (provisionally for 5 years with retrospective effect from June 1929).

11. Ismail College, Andheri (1930).—*In Arts provisionally for three years from June 1930 for teaching up to the B.A. Standard with a maximum of 125, 85 and 120 students in the First Year, in the Intermediate and in the B.A. classes respectively, the last of these in English (Pass), in Persian and Arabic (Pass and Honours) and in Urdu, and History and Economics (Pass).*

Deccan Group.

(a) British India.

O. 126.

1. Deccan College, Poona (1860).—*In Arts, excluding the B. Com. and B. T. Degrees ; in Science for the Intermediate Science Examination in Groups A and B subject to a maximum of 60 students, of whom not more than 20 should be admitted to Group B.*
2. Fergusson College, Poona (1884).—*In Arts, excluding the B. Com. and B. T. Degrees ; in Science for the purposes of the Examinations leading up to the B. Sc. Degree.*
3. Sir Parashurambhau College, Poona (1916).—*In Arts, as a First Grade College teaching up to the standard of the B. A. Degree both Pass and Honours courses in English, Sanskrit, Mathematics, Physics and Chemistry, History and Economics, Philosophy and Marathi, subject to a maximum of 300 students in the first year class, 150 in the second year class and 200 in the third and fourth year classes taken together. In Science for the Intermediate Science Examination in Groups A and B, subject to a maximum of 128 students (and an additional 16 students if these have secured exemption in Chemistry) provided that not more than 40 students in all are admitted in Group B and for the B. Sc. Examination in Mathematics, Physics and Chemistry, subject to a maximum of 60 students in the B. Sc. classes.*
4. College of Agriculture, Poona (1907).—*In Science for the purposes of the Examinations leading up to the Degree of B.Ag.*
5. College of Engineering, Poona (1865).—*In Science for the purposes of the Examinations leading up to the Degree of B.E. (Civil and Mechanical).*
6. Indian Law Society's Law College, Poona (1924).—*In Law, as a full grade College.*
7. Willingdon College, Sangli (1919).—*In Arts, as a First Grade College teaching up to the standard of the B. A. Degree for both Pass and Honours courses in English, Sanskrit, Marathi, Kannada Ardha-Magadhi, Mathematics, History and Economics, and Philosophy, subject to a maximum of 300 first year, 200 second year, 100 third year and 100 fourth year students.*

(b) *Indian States.*

S. 186.

8. Rajaram College, Kolhapur (1880).—*In Arts, as a First Grade College teaching up to the standard of the B. A. Degree for the Pass course in English, Sanskrit, Persian, Marathi, Kannada Urdu, Mathematics, History and Economics and Philosophy and for the Honours course in English, Sanskrit, Persian, Mathematics, History, Economics and Philosophy; the maximum number of students allowed in the first, second, third and fourth year classes in 250, 150, 60 and 60 respectively. In Science for the Intermediate Science Examination in Groups A and B provisionally for 4 years from June 1930 and subject to a maximum of 75 students of whom not more than 25 should be admitted in Group B.*

Karnatak Group.

O. 127.

- Karnatak College, Dharwar (1917).—*In Arts, as a First Grade College teaching up to the standard of the B. A. Degree for both Pass and Honours courses in Sanskrit, Persian, Mathematics, History and Economics, and Philosophy and for the Pass course in Pali, Kannada and Urdu, subject to a maximum of 250 students in the first year class, 150 in the second year class and 200 in the third and fourth year classes taken together. In Science for the Intermediate Science Examination in Groups A and B, subject to a maximum of 60 students in Group A and 40 in Group B.*

Sind Group.

O. 128.

1. Dayaram Jethmal Sind College, Karachi (1887).—*In Arts, excluding the B. Com. and B. T. Degrees; in Science, for the purposes of the Examinations leading up to the B. Sc. Degree.*
2. Sind National College, Hyderabad (1922).—*In Arts, provisionally up to the 31st May 1933 as a First Grade College teaching up to the standard of the B. A. Degree for both Pass and Honours courses in English, History and Economics, and Philosophy and for the Pass course in Mathematics, Persian, Sanskrit and Sindhi. The College is authorized to admit a maximum of 160 students in the First Year class, 100 in the Intermediate Arts class and 100 in the Junior and Senior B. A. classes together.*
3. Nadirshaw Eduljee Dinshaw Civil Engineering College, Karachi (1922).—*In Science, for the purposes of the Examinations leading up to the Degree of B. E. (Civil), subject to a maximum of 50 students in each of the three classes, F. E., S.E., and B. E.*
4. Karachi Law College (1926).—*In Law, as a full grade College provisionally for a period of five years from June 1926.*

CHAPTER III.—RECOGNIZED HOSPITALS AND APPROVED APPOINTMENTS.

O. 129. (i) Hospitals and Laboratories recognized by the University.

- I.—The Hospitals and Laboratories attached to the Grant Medical College, Bombay.—*In Medicine for the purposes of all Medical Examinations.*
- II.—The Cama and Allbless Hospitals, Bombay.—*In Medicine for the purposes of Branch II (Midwifery) of the M. D. Examination.*
- III.—Bombay Municipal Laboratory.—*For Practical Instruction in Chemistry for the B. Hy. Degree Examination.*
- IV.—The Sassoon Hospitals and the Byramjee Jeejeebhoy Medical School, Poona.—*In Medicine for the purposes of the Examinations for the M. D. and M. S. Degrees.*
- V.—The Civil Hospital and the Byramjee Jeejeebhoy Medical School, Ahmedabad.—*In Medicine permanently for the purposes of the Examinations for the M. D. and M. S. Degrees and provisionally for the D. O. Examination for two years from June 1928.*
- VI.—The Civil Hospital and Medical School, Hyderabad (Sind).—*In Medicine for the purposes of the Examinations for the M. D. and M. S. Degrees.*
- VII.—The Civil Hospital, Karachi.—*In Medicine for the purposes of the M. D. Examination (Medicine Branch only) and the M. S. Examination, subject to the proviso that the candidate should supplement his post-graduate study at the Hospital by attendance for a period of six months at the Pathological Laboratory of an affiliated Medical College in the case of the M. D. Examination and Dissection Room of such a College in the case of the M. S. Examination.*
- VIII.—The State General Hospital, Baroda.—*In Medicine for the purposes of the M. D. (Medicine and Midwifery) and M. S. Examinations, subject to the following conditions:—*
 - (a) A candidate for the M. D. in Medicine should put in a course of Pathology for the M. D. Degree at the Pathological Laboratory of an affiliated Medical College for a period of six months.
 - (b) A candidate for the M. D. in Obstetrics should put in six months' work at the Bai Motlabai and Petit Hospitals, Bombay, or at any other similar Hospitals which are fully recognized for this Degree.
 - (c) A candidate for the M. S. Degree should put in a six months' course of Operative Surgery at a fully recognized Hospital.
- IX.—The A. P. Mission Hospital, Miraj.—*In Medicine for the purposes of the Examination for the M. S. Degree, on condition that the authorities agree to make the necessary arrangements for instruction in Regional Anatomy and Operative Surgery at an early date, and report to the Syndicate as soon as the provision is made.*

- X*.—The Gokuldas Tejpal Hospital, Bombay.—*In Medicine for the purposes of M.D. and M.S. Examinations.*
- XI.—The Hospitals and Laboratories associated with the Seth Gordhandas Sunderdas Medical College, Bombay.—*In Medicine for the purposes of all Medical Examinations.*
- XII.—Nowrosjee Wadia Maternity Hospital, Parel, Bombay.—*In Medicine for the purposes of postgraduate study in Obstetrics only for Branch III (Midwifery) of the M.D. Examination subject to the condition that candidates supplement their work by postgraduate study in the subject of Gynæcology either at the King Edward Memorial Hospital or any other recognized Institution for a period of at least six months.*

O. 130. (ii) Approved Appointments under the M. D. and M. S. Ordinances.

The following appointments are recognized by the Syndicate as approved appointments under the provisions of Ordinance 267 (iv), (v) and (vi) of Chapter XXIX, Part V (page 300), and of Ordinance 277 (iv) of Chapter XXXI, Part V (page 303).

(1) *Grant Medical College Hospitals.*

Tutors in Medicine	}	M. D. (Medicine)
Clinical Registrars (In-patients)		
Tutors in Pathology	}	M. D. (Pathology)
(Stipendiary or Honorary)		
Tutors in Midwifery	}	M. D. (Midwifery)
Honorary Assistant Obstetric Physician		
Clinical Registrar	}	M. S.
Tutors in Surgery		
Clinical Registrars (In-patients)		
Casualty Officers		

(2) *Cama and Allbless Hospitals, Bombay.*

House Surgeons	}	M. D. (Midwifery)
Resident Medical Officer		
Honorary Assistant Surgeon		

(3) *Sassoon Hospitals, Poona.*

Medical Registrar	...	...	M. D. (Medicine)
Surgical Registrar	...	...	M. S.

(4) *Civil Hospital, Ahmedabad.*

Honorary Physician	...	...	M. D. (Medicine)
Honorary Gynæcologist & Obstetrician	...	...	M. D. (Midwifery)
Honorary Surgeon	...	...	M. S.

(5) *Civil Hospital, Hyderabad (Sind).*

Medical Officer I/C Medical Ward	...	M. D. (Medicine)
Medical Officer I/C Women's Ward	...	Do.
Medical Officer I/C Pathological and Clinical Laboratory	...	M. D. (Pathology)

*The recognition continues pending the report of the Committee.

(6) *Civil Hospital, Karachi.*

Honorary Physicians	...	...	M. D. (Medicine)
Honorary Surgeons	...	...	M. S.
House Surgeon	...	...	M. D. (Medicine)
Do.	...	...	M. S.

(7) *State General Hospital, Baroda.*

House Physician	...	...	M. D. (Medicine)
House Surgeon	...	...	Do.
Do.	...	...	M. S.
Surgical Registrar	...	...	M. S.
Lady Doctor	...	...	M. D. (Midwifery)

(8) *A. P. Mission Hospital, Miraj.*

Surgical Resident Assistant to the Visiting Surgeons	M. S.
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(9) *Gokuldas Tejpal Hospital, Bombay.*

Medical Registrars	M. D. (Medicine)
Surgical Registrars	M. S.

(10) *Seth Gordhandas Sunderdas Medical College and King Edward VII Memorial Hospital.*

Medical Registrar	}	M. D. (Medicine)
House Physicians		
Casualty Officers		
Medical Tutors		
Resident Pathologist	}	M. D. (Pathology)
Pathological Externe		
Demonstrators in Pathology and Bacteriology		
Obstetric Registrar		
Resident Accoucheurs	}	M. D. (Midwifery)
Gynæcological Registrar		
Do. House Surgeons	}	Do. (Branch II).
Surgical Registrar		
House Surgeons		
Casualty Officers		
Surgical Tutors	}	M. S.

CHAPTER IV.—REGISTRATION OF SCHOOLS.

[UNDER SECTION 33 (*kk*) OF THE ACT.]**S. 187.**

The Schools which are on the list of Registered Schools maintained by the School Leaving Examination Board, shall be included in the register to be kept by the Syndicate, subject to the same conditions or limitations as they may be under on the date on which the Act came into operation. Fresh applications for registration

should be addressed to the Registrar accompanied by such information as may be prescribed by the Syndicate.

S. 188. Applications for registration should be made at least one year before the date fixed for sending in applications for admission to the Matriculation Examination.

S. 189. Every application for registration shall be accompanied by a fee of Rs. 25. Every Registered School shall, in the month of July every year, pay a fee of Rs. 25. Failure to pay the fee will involve the withdrawal of recognition.

S. 190. Before a School is registered it shall be inspected by one or more persons appointed by the Syndicate for this purpose and shall be reported by them adequately to fulfil the following conditions :—

- (1) That the School supplies a want in the locality in which it is situated.
- (2) That the management is so constituted as to offer a reasonable prospect that the School will be well conducted.
- (3) That the teaching staff is sufficient and sufficiently qualified and the School is housed in suitable buildings and adequately equipped according to standards to be defined by the Syndicate.
- (4) That the resources at the disposal of the Manager are such as to afford a reasonable expectation that the School will be efficiently maintained.
- (5) That the School maintains regular classes from the 4th standard upwards.

S. 191. The Syndicate may, at any time and after due warning to the Managers, withdraw recognition from any School for failure to maintain the conditions of registration : Provided that such withdrawal has been approved by a two-thirds majority of the Syndicate.

S. 192. It shall be the duty of every Registered School—

- (a) to supply the Syndicate punctually on the dates named with such returns and information as it may require. The Syndicate shall have power to levy a fine of not more than Rs. 5 for every day's delay after the dates named in sending the returns and information.
- (b) to afford facilities for inspection to the members or representatives of the Syndicate.
- (c) to maintain such records as the Syndicate may from time to time require.

S. 193. The Syndicate shall keep a register of Schools permitted to present candidates for the Matriculation Examination.

0. 131. The following are the Registered Schools falling in the various groups specified in Section 13 of the Act.

Gujarat Group.

(a) British India.

Ahmedabad.

- | | |
|---|--|
| 1. Birla High School,
Dhandhuka. | 7. Modasa High School, Modasa. |
| 2. City High School,
Ahmedabad. | 8. Model High School,
Ahmedabad. |
| 3. <i>Government Girls' High
School, Ahmedabad.</i> | 9. New High School,
Ahmedabad. |
| 4. I. P. Mission High School,
Ahmedabad. | 10. Proprietary High School,
Ahmedabad. |
| 5. Jivkore Lalubhai New English
School, Ahmedabad. | 11. Ranchhodlal Chhotalal High
School, Ahmedabad. |
| 6. Maganlal Jeychand High
School, Viramgaum. | 12. Tutorial High School,
Ahmedabad. |

Broach.

- | | |
|---|--|
| 13. <i>Bai Motlabai Wadia Girls'
High School, Broach.</i> | 17. R. S. Dalal High School,
Broach. |
| 14. Municipal High School,
Ankleshwar. | 18. Shree Narmada English
School, Shukhatirtha, |
| 15. Municipal High School,
Jambusar. | 19. Union High School, Broach. |
| 16. Pioneer High School,
Broach. | |

Kaira.

- | | |
|---|--|
| 20. Dadabhai Nowroji High
School, Anand. | 25. Karamsad High School,
Karamsad. |
| 21. Edward Memorial High
School, Borsad. | 26. Municipal High School,
Kapadwanj. |
| 22. Edward Memorial High
School, Kaira. | 27. New English School, Nadiad. |
| 23. Government High School,
Nadiad. | 28. Sansthan High School, Dakor. |
| 24. Jubilee Institute, Umreth. | 29. Shri Saraswati High School,
Nadiad. |

Panch Mahals.

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|------------------------------|---------------------------------|
| 30. New High School, Dohad. | 32. Telang High School, Godhra. |
| 31. New High School, Godhra. | |

Surat.

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| 33. Bai Avabai High School,
Bulsar. | 39. Mandvi High School, Mandvi. |
| 34. D. C. O. Sarvajani High
School, Pardi. | 40. N. G. Jhaveri Jain High
School, Surat. |
| 35. D. E. Italia High School,
Chikhli. | 41. Sir J. J. High School, Surat. |
| 36. I. P. Mission High School,
Surat. | 42. Sorabji J. J. High School,
Surat. |
| 37. <i>I. P. Zenana Mission High
School, Surat.</i> | 43. T. & T. V. Sarvajani High
School, Surat. |
| 38. Madressa-E-Mohammedia
Piperdiwala High School,
Rander. | 44. Union High School, Surat, |

Gujarat Group—contd.

(b) Indian States.

S. 194.

Bansda.

1. Shri Pratap High School, Bansda.

Baroda.

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|--|--|
| 2. Ambaidas Jivabhai High School, Vaso. | 15. N. D. Halloo High School, Dwarka. |
| 3. Amreli High School. | 16. Naranbhai Keshavlal High School, Petlad. |
| 4. Baroda High School. | 17. Padra High School. |
| 5. Dabhoi High School. | 18. Patan High School. |
| 6. V. N. High School, Dharmaj. | 19. Seth M. & R. Tata High School, Billimora. |
| 7. Gokulbhai D. High School, Visanagar. | 20. Shri Sayaji High School, Baroda. |
| 8. Kothari High School, Kadi. | 21. Sir C. J. Readymoney High School, Gandevi. |
| 9. L. S. High School, Sidhapur. | 22. Sir C. J. N. Z. Madressa, Navsari. |
| 10. Maharani Chimnabai High School, Baroda. | 23. T. J. High School, Mehasana. |
| 11. <i>Maharani High School for Girls, Baroda.</i> | 24. Tulsibhai Bakorbhai High School, Bhadan. |
| 12. <i>M. E. M. Girls' High School, Baroda.</i> | 25. V. C. Galliara High School, Kathor. |
| 13. Methodist Boys' High School, Baroda. | |
| 14. Motibhai Mathurbhai High School, Sojitra. | |

Cambay.

26. Cambay High School.

Cutch.

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|-------------------------------|--|
| 27. Alfred High School, Bhuj. | 28. Goculdas Tejpal High School, Cutch-Mandvi. |
|-------------------------------|--|

Dharampur.

29. Shrimant Maharana Shri Mohandevji High School.

Kathiawar States.

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|---|--|
| 30. Alfred High School, Bhavnagar. | 41. M. G. P. Parekh High School, Japabad. |
| 31. Alfred High School, Rajkot. | 42. <i>Monghiba High School for Girls, Gondal.</i> |
| 32. Bahadur Khanji High School, Junagadh. | 43. Nawanagar High School, Jamnagar. |
| 33. Bhavsinhji High School, Porbander. | 44. Rajkumar College, Rajkot. |
| 34. Bhagwatsinhji High School, Dhoraji. | 45. Sagramji High School, Gondal. |
| 35. Coronation High School, Mangrol. | 46. Sanatan Dharma School, Bhavnagar. |
| 36. Daji Raj High School, Wadhwan. | 47. Saurashtra High School, Rajkot. |
| 37. Grassia College High School, Gondal. | 48. Seth M. N. High School, Mahuva. |
| 38. Harris High School, Palitana. | 49. Seth N. T. M. High School, Wadhwan. |
| 39. Kamribai High School, Jetpur. | 50. Sir Ajitsinhji High School, Dhrangadhra. |
| 40. L. D. Mooni High School, Sihor. | |

Gujarat Group.—(concl'd.)*Kathiawar States—concl'd.*

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| 51. Sir Jaswatsinhji High School, Lakhtar. | 54. Vakhtuba Charitable High School, Morvi. |
| 52. Sir Jaswatsinhji High School, Limdi. | 55. Wankaner High School, Wankaner. |
| 53. S. K. D. V. High School, Jodiya. | 56. Talukdari Girassia High School, Wadhwan. |

Mahi Kantha.

57. Sir Pratap High School, Idar.

Palanpur.

58. Palanpur High School.

Radhanpur.

59. Radhanpur High School.

Rajpipla.

60. Rajpipla High School.

Rewa Kantha.

- | | |
|--|---|
| 61. Sajjan Kunwar High School, Lunawada. | 62. Shree Ranjitsinhji High School, Devgad Baria. |
|--|---|

Konkan Group.*(a) British India.*

0. 132.

Bombay.

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|---|--|
| 1. <i>Alexandra Native Girls' English Institution, Fort.</i> | 13. Cathedral and John Cannon High School, Fort. |
| 2. American Mission High School, Byculla. | 14. <i>Chanda Ramji Hindu Girls' High School, Girgaum.</i> |
| 3. Anjuman-i-Islam High School, Bori Bunder. | 15. Chikitsak Samuha High School, Girgaum. |
| 4. Antonio Da Silva High School, Dadar. | 16. Christ Church High School, Byculla. |
| 5. Antonio DeSouza High School, Byculla. | 17. Chubildas Laloobhoy Boys' High School, Dadar. |
| 6. Aryan Education Society's High School, Girgaum. | 18. <i>Convent Girls' High School, Lower Mahim, Dadar.</i> |
| 7. Babu Pannalal P. Jain High School, Princess Street. | 19. <i>Convent High School for Girls, Clare Road, Byculla.</i> |
| 8. Bai Kabibai Hindu High School, Fort. | 20. Don Bosco High School, Tardeo. |
| 9. <i>Bai Ratanbai F. D. Panday Girls' School, Tardeo.</i> | 21. Elphinstone High School, Dhobi Talao. |
| 10. Bharda New High School, Fort. | 22. Esplanade High School, Fort. |
| 11. Bradley Night School, Thakurdwar. | 23. The Fellowship School, Girgaum. |
| 12. Byramji Jijibhoy Parsi Charitable Institute, Charni Road. | 24. Fort and Proprietary High School, Fort. |
| | 25. Girgaum English School, Thakurdwar. |

Konkan Group—contd.**Bombay—concl'd.**

- | | |
|---|--|
| 26. <i>Girton High School for Girls, Grant Road.</i> | 43. <i>Queen Mary High School for Girls, Girgaum.</i> |
| 27. Gokuldas Tejpal High School, Kalbadevi. | 44. Ram Mohan English School, Girgaum. |
| 28. Imperial High School, Lamington Road, Grant Road. | 45. Robert Money School, Girgaum. |
| 29. Israelite High School, Mazagaon. | 46. Sheth Dharamsey Govindji Thakersey High School, Girgaum. |
| 30. Jamshedji N. Petit Parsi Orphanage, Lal Bag. | 47. Sir J. J. Parsi Benevolent Institution, Fort. |
| 31. King George English School, Dadar. | 48. Sir Jacob Sassoon Free High School, Byculla. |
| 32. Maharashtra High School, Parel. | 49. Social Service League's Night School, Parel. |
| 33. Maratha High School, Sandhurst Road, Girgaum. | 50. <i>St. Columba High School for Girls, Gamdevi.</i> |
| 34. Marvadi Vidyalaya, Sandhurst Road, Girgaum. | 51. St. Mary's High School, Mazagaon. |
| 35. <i>Master's Tutorial Girls' High School, Grant Road.</i> | 52. St. Michael's High School, Mahim. |
| 36. Master's Tutorial High School, Grant Road. | 53. St. Sebastian's Goan High School, Thakurdwar, Bombay. |
| 37. Mathuradas Karsandas Natha Bhatia High School, Hornby Road, Fort. | 54. <i>St. Teresa's Girls' High School, Girgaum.</i> |
| 38. New Bombay High School, Girgaum Road. | 55. St. Xavier's High School, Fort. |
| 39. <i>New High School for Girls, Bombay 1.</i> | 56. <i>Students' Literary and Scientific Society's School for Girls.</i> |
| 40. Parel High School. | 57. Wilson High School, Girgaum. |
| 41. <i>Princess High School for Girls, Bombay.</i> | 58. <i>Young Ladies' High School, Fort.</i> |
| 42. Proprietary High School, Grant Road. | |

Kolaba.

- | | |
|---|--|
| 59. John Elphinstone High School, Alibag. | 62. K. E. Society's Vithoba Khandappa High School, Panvel. |
| 60. K. E. Society's High School, Alibag. | 63. K. E. Society's Mehandale High School, Roha. |
| 61. K. E. Society's High School, Mahad. | 64. Native Institution, Uran. |
| | 65. Private High School, Pen. |

Nasik.

- | | |
|---------------------------------------|---|
| 66. Nasik High School. | 69. St. George's High School, Nasik. |
| 67. New English School, Nasik. | 70. Zoroastrian Boarding School, Deolali. |
| 68. New Parsi Boarding School, Nasik. | |

Ratnagiri.

- | | |
|---|--------------------------------------|
| 71. Alfred Gadnay High School, Dapoli. | 74. George English School, Vengurla. |
| 72. Anant Shivaji Desai Topiwala High School, Malvan. | 75. Private High School, Rajapur. |
| 73. A. P. Mission High School, Vengurla. | 76. Ratnagiri High School. |
| | 77. United English School, Chiplun. |

Konkan Group—concl'd.*Thana.*

- | | |
|--|---|
| 78. Bassein High School, Bassein. | 85. St. Andrew's High School, Bandra. |
| 79. B. J. High School, Thana. | 86. St. Joseph's Convent High School, Bandra. |
| 80. English High School, Kalyan. | 87. St. Stanislaus High School, Bandra. |
| 81. Kanji Dharamsey High School, Chinchani. | 88. S. P. Hakimji High School, Bordi. |
| 82. New English High School, Dahanu. | 89. Tilak Vidyalyaya, Vile Parle. |
| 83. N. M. Wadia High School, Nargol. | |
| 84. Sheth Motilal Hargovindlal High School, Thana. | |

*(b) Indian States.***S. 195.***Janjira.*

1. Sir Siddi Ahmedkhan High School, Murud-Janjira.

Sawantwadi.

- | | |
|-----------------------|----------------------------|
| 2. Kudal High School. | 3. Sawantwadi High School. |
|-----------------------|----------------------------|

Deccan Group.*(a) British India.***O. 133.***Ahmednagar.*

- | | |
|---|---|
| 1. American Mission High School, Ahmednagar. | 4. Sir D. M. Petit English School, Sangamner. |
| 2. <i>American Mission High School for Girls, Ahmednagar.</i> | 5. S. P. G. Mission School, Ahmednagar. |
| 3. Education Society's High School, Ahmednagar. | |

East Khandesh.

- | | |
|--|--|
| 6. Anandibai Bankat High School, Chalisgaon. | 9. Goverdhandas S. High School, Jalgaon. |
| 7. D. S. High School, Bhusawal. | 10. Khandesh Education Society's High School, Amalner. |
| 8. Erandol High School. | 11. New English School, Jalgaon. |

Poona.

- | | |
|--|---|
| 12. Anglo-Urdu High School, Camp, Poona. | 18. Maharashtra Education Society's High School, Poona. |
| 13. Bharat High School, Kasba, Poona. | 19. New English School, Poona. |
| 14. Camp Education Society's High School, Poona. | 20. Nutan Marathi Vidyalyaya, Poona. |
| 15. Convent J. & M. English Teaching School, Poona. | 21. Poona Night High School. |
| 16. <i>High School for Indian Girls, Poona.</i> | 22. Private English School, Junnar. |
| 17. Maharashtra Education Society's High School, Baramati. | 23. <i>Seva Sadan High School for Girls, Poona.</i> |
| | 24. Shri Shivaji Maratha High School, Poona. |

Deccan Group—contd.**Poona—concl'd.**

- | | |
|---|---|
| 25. Sirdar Dastur Hoshang Boys' High School, Poona. | 27. <i>St. Andrew's High School for Girls, Poona.</i> |
| 26. <i>Sirdar Dastur Nowsherwan Girls' School, Poona.</i> | 28. <i>St. Helena's School, Poona.</i> |
| | 29. St. Vincent's High School, Poona. |

Satara.

- | | |
|--|-----------------------------------|
| 30. Darul-Ulloom Muslim High School, Panchgani. | 33. Hindu High School, Panchgani. |
| 31. Deccan Education Society's New English School, Satara. | 34. Parsi High School, Panchgani. |
| 32. Dravid High School, Wai. | 35. Satara High School. |
| | 36. Tilak High School, Karad. |

Sholapur.

- | | |
|-----------------------------------|---|
| 37. H. D. High School, Sholapur. | 39. Northcote High School, Sholapur. |
| 38. Municipal High School, Barsi. | 40. Victoria Jubilee High School, Pandharpur. |

West Khandesh.

- | | |
|---|---------------------------------------|
| 41. Garud High School, Dhulia. | 43. Municipal High School, Nandurbar. |
| 42. Jodharaj Ramlal City High School, Dhulia. | |

(b) Indian States.**S. 196.****Akalkot.**

1. Akalkot High School.

Aundh.

2. S. S. High School, Aundh.

Bhor.

3. Bhor High School.

Ichalkaranji.

4. Govindrao English School, Ichalkaranji.

Jamkhindi.

- | | |
|---|---------------------------------------|
| 5. Parashurambhau High School, Jamkhindi. | 6. Shri Harbhat High School, Kundgol. |
|---|---------------------------------------|

Kagal.

7. Shri Shahu High School, Kagal.

Kolhapur.

- | | |
|--|------------------------------------|
| 8. City High School, Kolhapur. | 12. Private High School, Kolhapur. |
| 9. <i>Esther Patton Girls' School.</i> | 13. Rajaram High School. |
| 10. Irwin Christian High School. | 14. Vidyapeetha High School. |
| 11. New School, Kolhapur. | |

Kurundwad.

15. Sitabai Patwardhan High School, Kurundwad.

Deccan Group —concl'd.*Miraj.*

16. Miraj High School.

Mudhol.

17. King George High School, Mudhol.

Phaltan.

18. Mudhoji High School, Phaltan.

Sangli.

- | | |
|--|-------------------------------|
| 19. Chintamanrao High School,
Shahapur. | 20. City High School, Sangli. |
| | 21. Sangli High School. |

Karnatak Group.*(a) British India.*

O. 134.

Belgaum.

- | | |
|--|--|
| 1. Beynon Smith High School,
Belgaum. | 5. Municipal High School, Gokak. |
| 2. Gilganchi Artal High School,
Belgaum. | 6. Municipal High School, Nipani. |
| 3. Jadhavji Anandji High School,
Athni. | 7. Sardars' High School, Belgaum. |
| 4. K. R. E. Society's High
School, Ainapur. | 8. <i>St. Joseph's Convent, Belgaum.</i> |
| | 9. St. Paul's High School, Bel-
gaum. |
| | 10. <i>Vanita Vidyalyaya, Belgaum.</i> |

Bijapur.

- | | |
|--|--|
| 11. Bassaweshwar High School,
Bagalkot. | 13. P. D. J. High School, Bijapur. |
| 12. Bijapur High School. | 14. Shri Sidheshwar High School,
Bijapur. |

Dharwar.

- | | |
|---|---|
| 15. Anglo-Urdu High School,
Hubli. | 21. Lakhamgawda Sardesai High
School, Dharwar. |
| 16. Basel Mission High School,
Dharwar. | 22. Lamington High School,
Hubli. |
| 17. <i>Convent Girls' High School,
Hubli.</i> | 23. Municipal High School,
Gadag. |
| 18. Dharwar High School. | 24. Municipal High School,
Haveri. |
| 19. Karnatak High School,
Dharwar. | 25. New English School, Hubli. |
| 20. <i>Karnatak Mahila Vidyalyaya,
Dharwar.</i> | 26. Victoria High School,
Dharwar. |

Kanara.

- | | |
|------------------------------------|---|
| 27. Edward High School, Ankola. | 30. Shri Marikamba High School,
Sirsi. |
| 28. Gibb High School, Kumta. | 31. St. Thomas High School,
Honawar. |
| 29. Karwar High School,
Karwar. | |

*(b) Indian States.**Jath.*

1. Jath High School.

Savanur.

2. Majid High School.

S. 197.

Sind Group.**(a) British India.****O. 135.****Hyderabad.**

- | | |
|---|--|
| 1. Government High School,
Hyderabad. | 4. Nara Kanya Vidyalaya,
Hyderabad. |
| 2. Kundanmal Girls' High
School, Hyderabad. | 5. Navalrai Hiranand Academy,
Hyderabad. |
| 3. Lawrence Madressah and High
School, Tando Bago. | 6. Nava Vidyalaya High School,
Hyderabad. |

Karachi.

- | | |
|--|--|
| 7. Bai Virbaiji Sopariwala High
School, Karachi. | 13. Mama Parsi Girls' High
School, Karachi. |
| 8. Church Mission Society's
High School, Karachi. | 14. Model High School, Karachi. |
| 9. Indian Girls' High School,
Karachi. | 15. N. J. High School, Karachi. |
| 10. Kanya Maha Vidyalaya,
Karachi. | 16. New High School, Karachi. |
| 11. Karachi Academy. | 17. Sind Madressah-tul-Islam,
Karachi. |
| 12. L. D. A. V. High School,
Karachi. | 18. St. Joseph's Convent, Karachi. |
| | 19. St. Patrick's High School,
Karachi. |

Larkana.

20. Government High School, Larkana.

Nawabshah.

- | | |
|---|--|
| 21. District Local Board's High
School, Tharushah. | 23. Madressah and High School,
Naushahro. |
| 22. K. C. Academy, Bhiria | |

Sukkur.

- | | |
|---------------------------------------|---|
| 24. Municipal High School,
Rohri. | 26. P. D. S. High School,
Shikarpur. |
| 25. Municipal High School,
Sukkur. | 27. Shikarpur Academy. |
| | 28. Shikarpur High School. |

Thar and Parkar.

29. Madressah and High School, Mirpurkhas.

Upper Sind Frontier.

30. Municipal High School, Jacobabad.

(b) Indian States.**S. 198.****Khairpur.**

1. Naz High School, Khairpur.

S. 199.**Goa.**

(UNDER SECTION 4A OF THE ACT.)

- | | |
|--|---|
| 1. Catholic Education Institute,
Margao. | 4. St. Joseph's High School,
Arpora, Bardez. |
| 2. Mater Dei Institution, Saligao,
Bardez. | 5. St. Thomas High School,
Aldona, Goa. |
| 3. School of the Sacred Heart of
Jesus, Canca Para, Bardez. | |

CHAPTER V.—SCHOOLS APPROVED FOR THE PURPOSES
OF EXAMINING PRIVATE STUDENTS AT THEIR
PRELIMINARY EXAMINATION.

Gujarat Group.

O. 136.

Ahmedabad

1. *Government Girls' High School, Ahmedabad.*
2. *Ranchhodlal Chhotalal High School.*

Baroda

3. *Amreli High School.*
4. *Baroda High School.*
5. *Maharani High School for Girls.*
6. *Patan High School.*
7. *Sir C. J. N. Z. Madressa, Navsari.*

Broach

8. *R. S. Dalal High School.*

Cutch

9. *Alfred High School, Bhuj.*

Kaira

10. *Government High School, Nadiad.*

Kathiawar

11. *Alfred High School, Bhavnagar.*
12. *Alfred High School, Rajkot.*
13. *Bahadur Khanji High School, Junagadh.*
14. *Daji Raj High School, Wadhwan.*
15. *Nawanagar High School, Jamnagar.*
16. *Wankaner High School, Wankaner.*

Palanpur

17. *Palanpur High School.*

Panch Mahals

18. *Telang High School, Godhra.*

Surat

19. *Bai Avabai High School, Bulsar.*
20. *I. P. Mission High School.*
21. *Sorabji J. J. High School.*
22. *T. & T. V. High School.*

Konkan Group.**O. 137.***Bombay*

23. *Alexandra Girls' English Institution.*
24. Anjuman-i-Islam High School.
25. Bharda New High School.
26. Elphinstone High School.
27. Esplanade High School.
28. Fort and Proprietary High School.
29. Sir J. J. Parsi Benevolent Institution.
30. St. Xavier's High School.
31. Wilson High School.
32. *Young Ladies' High School.*

Kolaba.

33. Vithoba Khandapa High School, Panvel.

Nasik

34. Nasik High School.

Ratnagiri

35. A. P. Mission High School, Vengurla.
36. Anant Shivaji Desai Topiwalla High School, Malwan.
37. Ratnagiri High School.

Thana

38. B. J. High School, Thana.

Deccan Group.**O. 138.***Ahmednagar*

39. American Mission High School, Ahmednagar.
40. Education Society's High School, Ahmednagar.

East Khandesh

41. Goverdhandas S. High School, Jalgaon.

Jamkhandi

42. Parashuram Bhau High School, Jamkhandi.

Kolhapur

43. Rajaram High School, Kolhapur.

Miraj

44. Miraj High School, Miraj.

Mudhol

45. King George High School, Mudhol.

Sangli

46. Sangli High School.

Poona

47. *High School for Indian Girls.*
48. *M. E. Society's High School, Poona.*
49. *New English School, Poona.*
50. *Nutan Marathi Vidyalaya.*
51. *Sardar Dastur Hoshang Boys' High School.*
52. *St. Vincent's High School.*

Satara

53. *Deccan Education Society's New English School.*
54. *Dravid High School, Wai.*
55. *Hindu High School, Panchgani.*
56. *Satara High School.*

Sholapur

57. *Northcote High School.*

West Khandesh

58. *Garud High School, Dhulia.*

Karnatak Group.

O. 139.

Belgaum

59. *Sirdar's High School, Belgaum.*

Bijapur

60. *Bijapur High School.*

Dharwar

61. *Dharwar High School.*
62. *Lamington High School, Hubli.*

Kanara

63. *Gibb High School, Kumta.*
64. *Karwar High School.*

Sind Group.

O. 140.

Hyderabad

65. *Government High School, Hyderabad.*
66. *Kundanmal Girls' High School, Hyderabad.*

Karachi

67. *N. J. High School, Karachi.*
68. *Mama Parsi Girls' School, Karachi.*
69. *Sind Madressah-tul-Islam, Karachi.*

Sukkur

70. *Shikarpur High School.*

CHAPTER VI.—RECOGNITION OF EXAMINATIONS OF OTHER UNIVERSITIES.

[UNDER SECTION 24(h) OF THE ACT.]

- R. 1.** In all cases in which recognition has been given to the examinations of other Indian Universities and Bodies as equivalent to the corresponding examinations of this University, such recognition is available only to those Universities and Bodies which reciprocate with this University and applicable only to such students as have attended a regular course of study laid down for the Examination at a college affiliated to their Universities or at an institution recognized by the Body concerned.
- R. 2.** Where such reciprocation does not exist, the Intermediate Arts and Intermediate Science Examinations will be accepted as equivalent to the First Year Arts Certificate Examination of this University.
- R. 3.** Statement showing the examinations of other Universities and Bodies which have been recognized as equivalent to the corresponding Examinations of this University.

Name of the University or Body.	Examinations recognized as equivalent to the corresponding Examinations of this University.
Agra ...	B.A., B.Sc., M.A., M.Sc., LL.B.
Aligarh ...	Inter. Arts, Inter. Science, B.A., B.Sc.
Allahabad ...	Inter. Arts, Inter. Science, B.A., B.Sc., LL.B.
Andhra ...	Inter. Arts, Inter. Science, B.A.
Annamalai ...	... ..
Benares ...	Inter. Arts, Inter. Science, B.A., B.Sc.
Calcutta ...	Inter. Arts, Inter. Science, B.A., B.Sc., LL.B.
Dacca ...	B.A., B.Sc., B.L.
Delhi ...	Inter. Arts, Inter. Science, B.A., B.Sc., Inter. Arts with Commerce Group (=Inter. Com.)
Lucknow ...	B.A., B.Sc., M.A., M.Sc., LL.B., M.B., B.S.
Madras ...	Inter. Arts, Inter. Science, B.A., B.L.
Mysore ...	Inter. Arts, Inter. Science, B.A., B.Sc.
Nagpur ...	Inter. Arts, Inter. Science, B.A., B.Sc.
Osmania ...	... ..
Patna ...	Inter. Arts, Inter. Science, B.A.
Panjab ...	Inter. Arts, Inter. Science, B.A., Diploma in Commerce (=Inter. Com.), LL.B.

Name of the University or Body.	Examinations recognized as equivalent to the corresponding Examinations of this University.
Rangoon ...	(a) Inter. Arts, (b) Inter. Science, B.A., B.Sc.
Hong-Kong ...	Matric, B.A., B.Sc. (Engineering) (=B.E.), M.A., M.Sc. (Engineering) (=M.E.), M.B., B.S., M.D., M.S.
Board of High School and Intermediate Education, U. P. ...	(c) High School (=Matriculation), Inter. Arts, Inter. Science.
Board of High School and Intermediate Education, C. P. ...	(c) High School (=Matriculation).
Any Province in India ...	European High School (=Matriculation).
Oxford ...	(d) Senior Local (=Matriculation).
Cambridge ...	(d) School Certificate (=Matriculation).
Government of India ...	(e) Diploma Examination of the Chiefs' College (=Matriculation).
Royal Indian Military College, Dehra Dun ...	Diploma (=Matriculation).
H. E. H. The Nizam's Government ...	(c) The High School Leaving Certificate (=Matriculation).
Board of Secondary Education, Delhi ...	(f) & (c) High School (=Matriculation).
London ...	Inter. Arts, Inter. Science.
The Indian Mercantile Marine Training Ship 'Dufferin' ...	(c) Final (=Matriculation).
Board of High School and Intermediate Education, Rajputana, Central India and Gwalior ...	(g) & (c) High School (=Matriculation), Inter. Arts, Inter. Science.

- (a) If passed in English and any of the three subjects of History, Sanskrit, Pali, Persian, Latin, a Modern European Language recognized by this University, Mathematics, Geography, Economics, Fine Arts, Logic, Local Self-Government and Public Health.
- (b) If passed in Mathematics or Biology, Physics, and Chemistry.
- (c) If passed with 40 per cent. marks in English and 35 per cent. marks in other subjects.
- (d) If passed in English, an Additional Language, Geography, Mathematics, and one other subject.
- (e) If passed in Course A with either Science or a Classical Language.
- (f) If passed in English, Mathematics, Additional Language, Elementary Science, and any two of the three subjects of History, Geography, and Economics.
- (g) If passed in one of the Classical or Modern European Languages recognized by this University.

- R. 4. The Matriculation or Entrance Examination conducted and controlled directly by every Statutory Indian University will be deemed equivalent to the Matriculation Examination of this University.
- R. 5. In no circumstances will the First Year's College Examination held by Colleges affiliated to any other Indian University be considered equivalent to the First Year's College Examination held by the Colleges affiliated to this University.
- S. 200. The Academic Council shall have power to declare any other examinations of any other Universities equivalent to the examinations of this University.

PART V.—EXAMINATIONS.

A. GENERAL.

Alterations of Dates of Examinations.

- O. 141. Whenever any of the days, on which any examination has to be held according to the Ordinances for the time being in force, happens to be a public holiday, or when in the opinion of the Syndicate there is sufficient reason for altering the days for holding any examination as fixed by the Ordinances, it shall be competent to the Syndicate to fix such days other than the days fixed by the Ordinances for holding such examination as they may consider proper : Provided that notice shall be given by a notification in the *Bombay Government Gazette* of any such alteration of dates, as the Syndicate may direct, at least 15 days before the day fixed by the Ordinances for the commencement of such examination.

Appointment of Examiners.

- O. 142. Applications for examinerships shall be made to the Registrar in the prescribed form obtainable from the office of the Registrar, within the date which will be notified from time to time.
- O. 143. The Registrar shall send a complete list of names received for examinerships in each subject to the Academic Council who will recommend to the Syndicate suitable persons to be appointed as examiners.
- O. 144. The Academic Council shall recommend to the Syndicate wherever possible a sufficient number of names to enable the Syndicate to exercise their discretion.

Exemptions.

- O. 145. Except as herein otherwise provided, a candidate who has passed a University examination in a subject or subjects in which identical papers (and practical test) are prescribed for another examination, shall (at his option) be entitled to exemption at the other examination from such subject or subjects : Provided always that the standard attained at the original examination is not lower than that required at the other examination. Candidates so exempted shall not be eligible for classes or for University awards.
- O. 146. When a student who has earned exemption in one or more subjects at an examination, appears next for that examination, he must once and for all make his election whether he will avail himself of the exemption or appear for the whole examination. If he elects to appear for the whole examination, then thereafter he cannot claim the benefit of the old exemption. But on his appearing for the whole examination

he may again earn exemption in one or more subjects and such fresh exemption earned will again be subject to the above provision. If he elects to avail himself of the exemption, then he must appear in all the remaining subjects at the same time. It is open to him to earn further exemption in one or more of the remaining subjects in which he so appears.

- O. 147.** If a candidate is allowed to join the next higher class because he has obtained exemption from all subjects but one in which he has failed, he will be allowed to appear in that one subject not later than the same examination season in which he appears at any time for the next higher examination. But he will, under no circumstances, be considered to have passed the next higher examination or any part of it although he may have obtained the marks necessary to pass, unless he has passed in the aforesaid single subject (with the percentage, if any, required for the total) at the lower examination in the same or in a previous examination season. But if a candidate passes as aforesaid in the single subject in the lower examination then he may earn as regards the higher examination any exemption that may be permissible under the Regulations although he may not have passed in the whole examination. When a candidate owing to his failure to pass in the single subject as aforesaid in the lower examination is not considered to have passed the higher examination or any part of it, the terms kept by him for such higher examination will be available to him for any future appearance at the higher examination.

Ex-Students.

- O. 148.** An ex-student who wishes to appear at any University examination shall, on payment of the prescribed fee, be admitted to that examination if he has been admitted on a previous occasion for the same examination, and produces a certificate to that effect from the Principal of the College from which he was sent up.

Conduct of Examinations.

- O. 149.** All examinations, admission to which of candidates being dependent on their applying by the appointed time with the prescribed certificates and paying to the Registrar the prescribed fee through the head of the institution or otherwise as the Syndicate may direct, shall be held at such times, in such places and commencing on such dates as the Syndicate may appoint from time to time and as specified below :—

Examination.	How many times held in a year.	Where held.	Date of Commencement.	Date of Application.	Examination Fee.
Matriculation ...	Once	Arts— Bombay, Poona, Ahmedabad, Karachi, Surat, Dharwar, Rajkot, Baroda, Hyderabad (Sindh), Kolhapur, Sangli, Nasik and Bhavnagar.	2nd Monday in April	One month before the examination.	Rs. 15

Examination.	How many times held in a year.	Where held.	Date of Commencement.	Date of Application.	Examination Fee.
					Rs.
Intermediate Arts	Once	Bombay, Poona, Baroda, Ahmedabad, Karachi, Sangli, Dharwar.	4th Monday in March	On or before the 20th February.	25
B.A. (Pass) (written)	Twice	Bombay, Poona, Karachi, Ahmedabad.	Monday following the 4th Monday in March. 1st Monday in October.	Do. 1st September.	40
B. A. (Hons.) ...	Once	Bombay, Poona, Karachi, Ahmedabad.	Monday following the 4th Monday in March.	On or before the 20th February.	50
B. A. (Pass and Hons.) Oral and Practical.	...	Bombay ...	After conclusion of written examination.	...	
M. A. ...	Once	Do. ...	3rd Monday in April.	2 Months, and in the case of thesis 6 months, before the examination.	75
Intermediate Commerce.	Once	Do. ...	4th Monday in March	2 weeks before the examination.	25
B. Com. ...	Twice	Do. ...	4th Monday in March and 2nd Monday in October.	Do. ...	50
M. Com.	Once	Do. ...	3rd Monday in March.	6 months before the examination.	100
B. T. Part I ...	Once	Bombay ...	March ...	31st January ...	15
„ Part II ...	Once	Do. ...	April ...	Do. ...	15
Science—					
Intermediate Science (Written.)	Once	Bombay, Poona, Baroda, Dharwar, Ahmedabad, Karachi.	4th Monday in March	20th February	30

Examination.	How many times held in a year.	Where held.	Date of Commencement.	Date of Application.	Examination Fee.
					Rs.
Intermediate Science (Practical).	Once	Bombay, and at other centres if there are 50 candidates in a subject at a centre. In Biology, at Ahmedabad and Baroda in alternate years.	After the conclusion of the written examination.	...	...
B. Sc. (Principal)	Written	Once	Bombay, Poona, Ahmedabad, Karachi.	Monday following the 4th Monday in March.	20th February 40*
B. Sc. (Subsidiary)		Twice	Do. ...	Monday following the 4th Monday in March and 1st Monday in October.	20th February and 1st September. 25*
B. Sc. (Practical)	...	Bombay.			
M. Sc. ...	Once	Do.	3rd Monday in April (for Mathematics). Last Monday in July for other subjects.	14th February, 7th June and 14th September. One month before the examination.	100
M. Sc. (French and German Translation Test.)	Twice	Do.	2nd Monday in January and last Monday in July.	Do.	25
Intermediate Agriculture.	Once	Poona	2nd Monday in March.	10th February	30
B. Ag. ...	Once	Do.	Do.	Do.	25* for subjects III & IV. 40* for the rest.
M. Ag. ...	Once	...	...	31st December	100
F. E. ...	Once	Poona, Karachi	3rd Monday in March.	3 weeks before the examination.	30
S. E. (Civil and Mech.)	Once	Poona, Karachi (Civil).	Do. ...	Do. ...	30

*For both at a time Rs. 50.

Examination.	How many times held in a year.	Where held.	Date of Commencement.	Date of Application.	Examination Fee.
					Rs.
B. E. (Civil and Mech.)	Twice	Poona, Karachi (Civil).	4th Monday in March and 2nd Monday in October.	3 weeks before the examination.	50
M. E. ...	Once	Bombay ...	3rd Monday in March.	3 months before the examination.	100
Law—					
1st LL. B. ...	Twice	Bombay, Poona, Karachi, Ahmedabad.	3rd Monday in April and 2nd Monday in October.	3 weeks before the examination.	30
2nd LL. B. ...	Twice	Do.	Do.	Do. ...	50
LL.M. ...	Once	Bombay ...	3rd Monday in June.	2 months before the examination.	150
Medicine—					
1st M.B.B.S. ...	Twice	Bombay ...	2nd Monday in December and 1st Monday in April.	3 weeks before the examination.	30
2nd M.B.B.S. ...	Twice	Do. ...	1st Monday in January and 3rd Monday in April.	Do. ...	15
3rd M.B.B.S. ...	Twice	Do. ...	2nd Monday in December and 1st Monday in April.	Do. ...	45*
B. Hy. ...	Once	Do. ...	4th Monday in June.	2 months before the examination.	75
M. D. ...	Once	Do. ...	3rd Monday in June.	Do. ...	200†
M. S. ...	Once	Do. ...	Do. ...	Do. ...	200‡
D. Hy. ...	Once	Do. ...	Do. ...	Do. ...	200
D. O. ...	Once	Do. ...	4th Monday in June.	One month before the examination.	200

*Rs. 25 for each group.

†Rs. 100 for an M.D. who appears for a different Branch and for an M.S.

‡Rs. 100 for an M.D.

- O. 150.** When there is more than one centre for a written examination, question papers shall be given to candidates on the same day and at the same time in every centre.
- O. 151.** (i) Unless otherwise specially provided for, all examinations except practical and *viva voce* shall be conducted by means of printed or written papers.
- (ii) Candidates must answer the question papers in English except when otherwise stated.
- O. 152.** No question calling for a declaration of a religious belief on the part of a candidate shall be put at any University examination and no answer or translation given by any candidate shall be objected to on the ground of its giving expression to any particular form of religious belief.
- O. 153.** As soon as practicable after the conclusion of an examination, the Syndicate shall publish a list of the names of successful candidates in the following manner, the names, except when otherwise stated, being arranged in alphabetical order :—

Examination	The result : How published	
<i>Arts—</i>		
Matriculation	In one class	
Intermediate Arts	In two Classes and Pass	
Bachelor of Arts	Do	
Master of Arts	Do	
Intermediate Commerce	Do	and names in class I arranged in order of merit.
Bachelor of Commerce	Do	Do
Master of Commerce	In one class	
Bachelor of Teaching (Part I)	Do	
Bachelor of Teaching (Part II)	In two classes. None who has failed in either Part at any time shall be placed in Class I.	
<i>Science—</i>		
Intermediate Science	In two classes and Pass.	
Bachelor of Science	In two classes and Pass showing if there is distinction in Principal subject.	
Master of Science	Pass or Pass with distinction.	
Intermediate Agriculture	In two classes, arranged in order of merit.	
Bachelor of Agriculture	Do	Do
Master of Agriculture	In one class.	
First Engineering	In two classes and Pass, names in Class I arranged in order of merit.	
Second Engineering (Civil and Mechanical)	Do	Do
Bachelor of Engineering (Civil and Mechanical)	In two classes and Pass. The names of those who pass in each class arranged in order of merit.	
Master of Engineering	Pass and Pass with distinction.	

Examination	The result: How published	
	<i>Law—</i>	
First LL.B.	In two classes. The names in First class arranged in order of merit.	
Second LL.B.	Do	Do
Master of Laws	In two classes.	
	<i>Medicine—</i>	
First M.B., B.S.	In two classes (the names in the First class arranged in order of merit), showing the distinction in any subject.	
Second M.B., B.S.	In one class showing distinction in any subject.	
Third M.B., B.S.	In two classes (the names in the First class arranged in order of merit), showing the distinction in any subject.	
Bachelor of Hygiene	In one class.	
Doctor of Medicine	Passed with distinction or passed.	
Doctor of Hygiene	Do	Do
Master of Surgery	Do	Do
Diploma in Ophthalmology In one class.		

- O. 154.** When the examination is by thesis a list of successful candidates arranged in alphabetical order will alone be published, except at the M.A. Examination where there shall be two classes and Pass.
- O. 155.** Failure to pass an examination will not disqualify the candidate for presenting himself on a subsequent occasion on a new application being forwarded and a fresh fee paid.
- O. 156.** A certificate will be given to those who pass an examination.

B. Admission to, Syllabus for, and Standard for passing, Examinations.

CHAPTER I.—MATRICULATION.

- S. 201.** Candidates must forward their applications to the Registrar, one month before the commencement of the examination. No application that is not complete in every respect will be accepted by the Syndicate and the names of the applicants whose applications are rejected will be communicated as soon as may be, to their Head Masters.
- S. 202.** (a) If a candidate, at the date of his application for permission to appear at the Matriculation Examination, belongs to a Registered School, he must submit his application through the Head Master of such School in the prescribed form.
- (b) If such candidate has, during the period commencing from the month of June of the calendar year preceding that in which he applies, attended any other Registered School or Schools his application must be accompanied by a certificate from the Head Master of such other School or Schools, showing his attendance at the School during the year.

(c) If such transfer has been made in the second term, the application must be accompanied by a certificate from the Head Master of the Schools previously attended in that term that his character and progress were satisfactory.

S. 203. (a) If a candidate, at the date of his application for permission to appear at the Matriculation Examination, does not belong* to a Registered School, he must appear at the Preliminary Examination to be conducted by any Registered School approved by the Syndicate for that purpose, on payment of a fee† fixed by the Syndicate and submit his application through the Head Master of such School with a certificate from the latter that from his personal knowledge or inquiries made the candidate is a fit person as regards character and has further completed the practical courses prescribed by the Syndicate.

(b) If such candidate has, during the period commencing from the month of June of the calendar year preceding that in which he applies, attended any Registered School or Schools, his application must be further accompanied by the certificates required in similar circumstances in Statute 202 (b).

S. 204. Thirty days before the commencement of the examination, each candidate for examination shall pay or cause to be paid to the Registrar at Bombay or to such person as he may appoint in the mofussil, a fee of Rs. 15 for which a receipt will be given.

O. 157. The examination for Matriculation shall be in such subjects as may be from time to time prescribed by the Syndicate and the Syndicate may make provision for holding separate Matriculation Examination for different classes of students having regard to the courses of study which the students propose to follow.

O. 158. Candidates will be examined in the following five heads :—

(1) English.—There shall be two papers each of three hours on Composition, Grammar and prescribed texts for general study.

(2) Languages :—

(a) Vernaculars.—There shall be one paper of three hours including questions on prescribed texts and questions to test the power of expression and composition in the vernacular. These questions shall be set and answered in the vernacular except that an unseen passage may be set for translation from simple English into the vernacular.

* All Registered Schools are allowed to examine *their own ex-students* at their Preliminary Examination. An Ex-student of a School is one who was once sent up for the Examination by the School but had failed to pass it. The list of approved Schools is printed at pp. 85-87 hereof.

† The fee fixed for examining a private candidate at the Preliminary Examination is Rs. 5.

(The following are the recognised vernaculars :—
Marathi, Gujarati, Kannada, Sindhi, Urdu,
Portuguese and Hindi.)

(b) Other Languages are :—Sanskrit, Pali, Avesta-Pahlavi,
Arabic, Persian, Hebrew, Latin, Greek, French
and German.

There shall be one paper of three hours containing
unseen passages for translation from and into
English or the vernacular and questions on
Grammar and Composition.

(3) Mathematics :—

(a) Arithmetic.—There shall be one paper of two hours.

(b) Algebra.—There shall be one paper of two hours.

(c) Geometry.—There shall be one paper of two hours.

The marks for Arithmetic, Algebra and Geometry shall be added
together under this head.

(4) History and Geography :—

(a) Geography.—There shall be one paper of three hours
on Physical, Political and Commercial Geography.

(b) History.—There shall be one paper of three hours on
the outlines of the History of England and India
and of the present administration of India.

The marks for History and Geography shall be added together
to constitute the fourth head.

(5) Elementary Science :—

(a) Elementary Physics and Chemistry,

(b) Elementary Botany and Zoology

(c) Elementary Physiology and Hygiene,

(d) Domestic Science—(for girls),

} There shall be
one paper of
two hours for
each of these
sub-heads.

and such other heads as the Syndicate may approve.

A candidate shall not be permitted to appear in Elementary
Science unless he produces a certificate from the Head of a Regis-
tered High School showing that he has carried out satisfactorily the
practical course prescribed for Science.

O. 159. Examination shall be conducted by means of written answers to
papers, provided that in Domestic Science there may be oral or
practical test.

O. 160. The candidates must answer the question papers in English
except that in Classical Indian Language (Sanskrit, Pali, Arabic,
Persian) and History they may answer them in the vernacular. The
paper in the vernacular must be answered in the vernacular and the

paper in Marathi must be answered in Balbodh ; but each question paper must be answered in one language only unless the examiners specifically direct otherwise.

O. 161. The standard required for a pass in the subjects of the examination shall be not less than 40 per cent. of the marks in English and not less than 35 per cent. of the marks in other subjects. To gain distinction in any subject, a candidate must obtain not less than 70 per cent. of the full marks in that subject.

O. 162. If a candidate appears for the full Matriculation Examination Certificate but fails to obtain the required minimum in any one head, the Syndicate shall condone the deficiency according to the following procedure :—

A deficiency of one mark under that head shall be condoned for every one per cent. by which the total marks in the whole examination gained by the candidate are in excess of forty per cent. of the total marks possible.

O. 163. (a) A candidate who has obtained fifty per cent. of the total marks in any subject may, at his option, be excused from appearing in that subject at a subsequent examination and will be declared to have passed the whole of the examination when he has passed in all the subjects of the examination.

(b) Exemption from appearing in any subject at a subsequent examination secured under Clause (a) ceases to operate as soon as a candidate appears in that subject at any subsequent examination.

(c) A candidate who claims exemption under Clause (a) shall not be allowed the benefit of the condonation provided for in Ordinance 162.

O. 164. The Syndicate will grant the Matriculation Certificate to candidates who pass at one and the same examination in the following five heads :—

- (1) English,
- (2) A Language other than English,
- (3) Mathematics (Arithmetic, Algebra and Geometry),
- (4) History—Outlines of the History of England and India and of the present administration of India,

and

Geography—Physical, Political and Commercial,

- (5) Elementary Science.

O. 165. Not later than the 24th May, the Syndicate shall publish lists of those who qualify for Matriculation Certificate with the total number of marks obtained by each candidate and the name of his school.

O. 166. The Certificate granted to the candidates will show the heads in which they have passed or passed with distinction. Each certificate must bear the holder's signature in English. These Certificates will

be issued through the Heads of the Schools from which the candidates appeared.

- O. 167. Examiners in each head shall be required to submit to the Syndicate a detailed report of the work of the candidates examined by them and a copy of the report shall be sent to every School.

Syllabus.

- O. 168. ENGLISH.

Two PAPERS—(each of three hours)—100 marks each.

[N.B.—In each of the two papers option shall be given between questions of the same type in the proportion of one question to four whole questions set.]

Text-Books.

- (1) For General Reading—

A book of about 125 pages. It may be either—

- (a) an abridged edition of a novel later than 1850, or
- (b) two or three plays of Shakespeare in prose narrative with a few scenes interspersed, and also a few Greek legends, or
- (c) a volume of short stories from writers since 1850, or
- (d) a book of travels or biography.

- (2) For Detailed Study—

A book of about 100 pages, consisting of complete poems and prose-selections. Half the material in each form shall be drawn from the 20th century.

[N.B.—The verse material from (1) and (2) together shall not exceed 1200 lines.]

Papers.

The material for the two papers shall be drawn from all the following heads and divided between the two papers in any way acceptable to the paper-setters, provided that each paper carry 100 marks and that the proportions of marks assigned herein to each part of the subject be adhered to.

Composition—

- (a) Alternative themes, either descriptive or narrative or imaginative.
- (b) Précis of an unseen prose passage of moderate difficulty and not of an abstract character.
- (c) Letter-writing.
- (d) Expansion of a story on hints given.
- (e) Dialogues.

80 marks.

Grammar—

Questions on direct and indirect speech, analysis of sentences, use and sequence of tenses, the definite and indefinite articles and other matters coming under the general head of "grammar". The termino-

logy set forth in the Report of the Joint Committee on Grammatical Terminology (published by John Murray) is recommended for use.
25 marks.

Appreciation—

Questions testing the candidate's power of understanding and expressing the substance of simple poems, seen and unseen. 20 marks.

Texts—

General questions on the subject-matter of the prescribed books.
75 marks.

MARATHI.

O. 169.

ONE PAPER—(Three hours)—100 marks.

The paper shall contain questions on the following :—

I. Prose—

- (a) 50 pages for thoughtful reading from a prescribed text-book containing one or more essays or selections from standard authors.
- (b) From 200 to 250 pages for rapid reading from a prescribed text-book containing narrative or descriptive matter.

Questions on (a) and (b) to carry 35 marks.

II. Poetry—

- (a) 300 lines of poetry prescribed from classical Marathi poets of the period extending from the beginning of the 15th to the end of the 18th Century A.D. for critical study.
- (b) 700 lines of easy narrative and descriptive poetry, both Modern and Classical, for general study.

Questions on (a) and (b) together will carry 25 marks.

III. Composition—

This shall include—

- (a) An essay on a simple subject of about 30 lines.
- (b) Précis-writing or a dialogue or an unseen passage in Marathi for explanation in Marathi, or an English passage for translation into Marathi.

Questions on (a) and (b) together will carry 30 marks.

IV. Grammar—

There will be questions on sentence-building, Marathi compounds and simple derivations carrying 10 marks.

Note.—Candidates are expected to pay particular attention to correctness of language and expression although due allowance will be made with regard to controversial points in this connection.

O. 170.

GUJARATI.

ONE PAPER—(Three hours)—100 marks.

I. Prescribed Texts (50 marks)—

- (i) Prose :—About 200 pages.
- (ii) Poetry :—About 1,500 lines consisting of a continuous poem of about 1,000 lines and Selections.

II. Grammar and Composition (50 marks)—

- (i) Grammar including parsing, analysis, and solution of simple samasas (compounds). 20 marks.
- (ii) Composition with or without a question on translation of an easy English unseen passage into Gujarati. 30 marks.

[N.B.—Candidates are expected to spell ordinary “tatsama” words correctly.]

O. 171.

KANNADA.

ONE PAPER—(Three hours)—100 marks.

Texts—

- (1) Prose :—about 250 pages of a modern author or authors.
- (2) Poetry :—about 1,200 lines of which about 800 lines will be of one long continuous poem and the rest selections of not greater difficulty than Jaimini Bharat or Channa-Basav Purana. 50 marks.

General—

- (1) Grammar such as Mulbagal's Nudigattu and Kannada prosody so far as it relates to the texts.
- (2) Original composition in Kannada of about 40 lines on a general subject of ordinary life.
- (3) Translation of an unseen simple English passage of about 15 lines.
- (4) Paraphrase of modern unseen Kannada poetry of about 12 lines. 50 marks.

O. 172.

SINDHI.

ONE PAPER—(Three hours)—100 marks.

- (a) Reading 200 pages from standard prose authors, and about 1,000 lines of poetry prescribed by the Syndicate. 50 marks.
- (b) Composition. This need not be restricted to essay-writing, but may include précis-writing, expansion of an idea, letter-writing or writing an official document. 20 marks.
- (c) Translation from an unseen passage from English into Sindhi. 15 marks.
- (d) Grammar including parsing and analysis. 15 marks.

O. 173.

HINDI.

ONE PAPER—(Three hours)—100 marks.

The paper should contain questions on the following :—

I. Prose (25 marks)—

- (a) From 50 pages for thoughtful reading from a prescribed text-book containing one or more essays from standard authors.
- (b) From 200 pages for rapid reading from a prescribed text-book containing narrative or descriptive matter or one or two dramas written by standard authors.

II. Poetry (25 marks)—

- (a) From 900 to 1,000 lines of descriptive poetry, preferably one continuous piece by a modern Hindi poet, for general study.
- (b) From 300 to 400 lines of poetical selections from the works of the Hindi poets of 15th to 18th century, for critical study.

The total number of lines in (a) and (b) not to be less than 1,300.

III. Composition (25 marks)—

This should include précis-writing, dialogue, expansion of an idea and essay-writing (narrative, descriptive and reflective).

IV. Translation (15 marks)—

This may be in the form of an exercise of 12 lines from English into Hindi or paraphrase of unseen poetry.

V. Grammar (10 marks)—

This should include syntax, parsing, analysis and figures of speech.

O. 174.

URDU.

ONE PAPER—(Three hours)—100 marks.

Text-Books to be prescribed in prose (200 pages), and poetry (1,000 lines or hemistichs).

The paper will consist of—

- (a) Questions on prescribed text-books, carrying 55 marks and including passages for explanation, paraphrase, summary, etc.
- (b) Questions on Grammar, carrying 15 marks and including syntax, common figures of speech, idioms, proverbs and ordinary Arabic measures.
- (c) Original composition, carrying 30 marks and consisting of (i) an essay, précis-writing or dialogue, etc., extending to not less than forty lines, and (ii) an unseen passage of about ten lines of simple English for translation into Urdu.

O. 175.

PORTUGUESE.

ONE PAPER—(Three hours)—100 marks.

I. Texts to be prescribed, one in prose of not more than 200 pages, and one in poetry of not more than 1,000 lines. Questions thereon to carry 50 marks and to consist of—

(a) Translation into English from the prescribed text with such explanatory notes as may be required to make the context clear.

(b) Questions on the subject-matter of the prescribed texts, such as summarising, narrating incidents, drawing character-sketches, etc.

II. Composition :—30 marks.

(a) Translation from simple modern English into Portuguese.

(b) Exercises in Portuguese composition in essay or letter form on ordinary topics, descriptive rather than reflective.

III. Grammar :—20 marks.

Special attention to be paid to (a) synthesis of sentences, and (b) to direct and indirect speech.

[N. B.—The new orthography to be adopted.]

O. 176.

SANSKRIT.

ONE PAPER—(Three hours)—100 marks.

Literature.—Passages for translation from and into Sanskrit.

65 marks.

Grammar and Composition.—The standard of Grammar will be as in Dr. Bhandarkar's 1st and 2nd Books omitting the 1st and 2nd person forms of the Perfect Tense and requiring only recognition of forms in the case of Aorist, Benedictive, Desiderative, and Frequentative forms. A general knowledge of syntax as dealt with in the first eleven lessons in Apte's Guide to Sanskrit Composition will be expected. Knowledge of participles, infinitives, and gerunds as in Dr. Kielhorn's Grammar (Chapter IX) will also be required.

35 marks.

Literature.—Prose of the standard of the Kadambarisara of Mr. Apte. Poetry of the standard of Ramayana—Sundara Kanda, story of Nala in the Mahabharata and easier portions of the Raghuvamsa.

Translation into Sanskrit.—For translation into Sanskrit an easy passage of continuous narrative should be set.

At least 45 marks should be set apart for translation from Sanskrit into English or the vernacular.

O. 177.

PALI.

ONE PAPER—(Three hours)—100 marks.

I. The study of Pali should begin at the High School on the basis of Sanskrit. The basis should consist of general knowledge of Sanskrit Grammar, as embodied in the 1st Book and the first twelve lessons of the Second Book of Dr. Bhandarkar. Thus the fourth and

fifth standards of the High School should be taken up by Sanskrit studies ; based on this knowledge of Declension and Conjugation, the Pali studies are to start from the sixth standard onwards. Pali Grammar and Language should be given due attention during the last two years of study as well as at the Matriculation Examination.

II. The Pali paper should contain :—

1. Questions on the Grammar of Pali and Sanskrit amounting to 40 per cent. of the total number of marks. The questions on Pali Grammar are to cover the two years' studies in the sixth and seventh High School standards, those on Sanskrit Grammar being restricted to the studies in the fourth and fifth standards. The rest of the paper is to be set on Pali exclusively.
2. Questions on Language comprising the following—
 - (a) Translation—

Pali-English : Prose passages of the nature of the simpler Jatakas ; easy poetry passages of the nature of the Dhammapada ;

English-Pali: A piece of a simple, continuous, narrative style.
 - (b) Composition: A simple and short description of either a village or a town, or a vihara or a religious festival or a ceremony, the materials for which may easily be gathered from the passages read.

0. 178.

AVESTA-PAHLAVI.

ONE PAPER—(Three hours)—100 marks.

Grammar :—25 marks.

The course will comprise the matter treated of in the Manuals of Errard Sheriarji Dadabhai Bharucha : Lessons in Avesta, Part I, II, and lessons in Pahlavi, Part I, II.

The questions on Grammar to be set at the Matriculation Examination will be such as can be answered from these two Manuals.

Translation :—50 marks.

(1) Avesta Pahlavi-English.

Easy prose and poetical passages from the Avesta and easy prose passages only from Pahlavi.

(2) English-Avesta Pahlavi.

Easy prose passages of a descriptive or narrative nature.

The limited vocabulary of the Avesta will determine the choice of passages.

Composition :—25 marks.

Composition shall be done in Pahlavi only. The subject matter of such composition shall be either an easy continuous description or a story.

The passages for translation and subjects for composition in Pahlavi shall not go beyond the standard of Arda Viraf-Nameh or Karnamak-i-Artakh-shu-e-Papakari and the passages for translation in Avesta shall not go beyond the standard of Vendidad Pragard II and III and Haoma Yasna.

O. 179.

ARABIC.

ONE PAPER—(Three hours)—100 marks.

The paper will consist of :—

- (a) Translation, carrying 50 marks and comprising—
 - (i) passages in prose and poetry of a standard not below that of Majani-ul-adab, Part I, Chapters 1-4, and Nafhat-ul-Yaman, Chapter I, for translation into English or a vernacular, and
 - (ii) a passage in simple English for translation into Arabic.
- (b) Grammar consisting of 30 marks. The grammatical portion will include questions on etymology (Talilat, Tasrifat, Khasiyyat-Abwab) and syntax (Mabniyyat, Marfuat, Mansubat and Majrurat) as treated in Thatcher's Arabic Grammar or Hafiz Abdurrahman Amritsari's Kitab-us-Sarf and Kitab-un-Nahw.
- (c) Composition carrying 20 marks. Candidates may be asked to write short letters, simple short stories, or dialogues, etc., so as to test their ability to write simple and correct Arabic.

O. 180.

PERSIAN.

ONE PAPER—(Three hours)—100 marks.

The paper will consist of—

- (a) Translation, carrying 60 marks and comprising—
 - (i) Persian passages (prose as well as poetical, of a standard not below that of the Gulistan and the Bustan) for translation into English or a vernacular, and
 - (ii) a simple English passage for translation into Persian.
- (b) Grammar, carrying 15 marks. The grammar portion may include questions on a general knowledge of syntax, common figures of speech, derivation and ordinary Arabic measures.
- (c) Composition, carrying 25 marks. Candidates may be asked to write letters, narrate short stories or dialogues, describe familiar scenes, etc., so as to test their ability to write simple and correct Persian.

O. 181.

HEBREW.

ONE PAPER—(Three hours)—100 marks.

The paper will consist of prose passages for translation from and into English and questions on Grammar.

The passages for translation from Hebrew—Biblical and Modern—into English shall be of the standard of prose of Genesis, Judges, Samuel and Kings.

There shall be short sentences from Hebrew into English to test the candidate's knowledge of Hebrew idiomatic constructions. The English passage for translation into Hebrew may consist of a short easy narrative.

Questions will be set on Hebrew Grammar, limited to accident and elementary syntax. Careful attention must be paid to Hebrew pointing. Not more than 30 per cent. of the total marks shall be assigned to the questions on Hebrew Grammar.

0. 182.

LATIN.

ONE PAPER—(Three hours)—100 marks.

In Latin there shall be one paper consisting of prose passages for translation from and into English and questions on Grammar. The passages for translation from Latin into English shall be of the standard of Caesar or the easier portions of Cicero and Livy. Questions will be set on Latin Grammar—accidence and syntax—and there shall be short sentences for translation from English into Latin to test the candidate's knowledge of idiomatic constructions. In addition a short continuous narrative shall be set for translation into Latin.

Not more than 25 per cent. of the total marks shall be assigned to the questions on Latin Grammar.

0. 183.

GREEK.

ONE PAPER—(Three hours)—100 marks.

In Greek there shall be one paper consisting of prose passages for translation from and into English and questions on Grammar. The passages for translation from Greek into English shall be of the standard of Xenophon's *Anabasis* and *Cyropædia* and the easier portions of Thucydides. Questions will be set on Greek Grammar—accidence and syntax—and there shall be short sentences for translation from English into Greek to test the candidate's knowledge of idiomatic constructions. In addition, a short continuous narrative shall be set for translation into Greek. Some knowledge of accents is required.

Not more than 30 per cent. of the total marks shall be assigned to the questions on Greek Grammar.

0. 184.

FRENCH.

ONE PAPER—(Three hours)—100 marks.

1. Grammar—25 marks.

Questions of the type found in Weekley's or Frazer's Grammar.

2. Translation from French into English and from English into French—50 marks.

Easy descriptive or narrative passages, not excluding simple poetry.

The standard suggested is approximately that of Siepmann's Elementary Series or of some equivalent series.

3. Original Composition—25 marks.

A simple letter or a simple description or an easy story.

[N.B.—All the questions shall be set in English.]

O. 185.

GERMAN.

ONE PAPER—(Three hours)—100 marks.

1. Grammar—25 marks.

Questions of the type found in Otto Sauer's Grammar.

2. Translation from German into English and from English into German—50 marks.

Easy descriptive or narrative passages not excluding simple poetry.

The standard suggested is that of Grimm's or Hauff's tales and novels.

3. Original Composition—25 marks.

A simple letter or a simple description or an easy story.

O. 186.

ARITHMETIC.

ONE PAPER—(Two hours)—50 marks.

Simple and compound rules, vulgar and decimal fractions (omitting recurring decimals), contracted methods of multiplication and division, proportion, metric system, simple problems on direct exchange, interest and Banker's discount, stocks and shares, profit and loss, square root, areas of triangle, parallelogram and circle, volumes and surfaces of rectangular solids, cone, cylinder and sphere.

The use of algebraical symbols and processes should be encouraged.

Examples of a difficult nature or involving lengthy processes will not be set.

O. 187.

ALGEBRA.

ONE PAPER—(Two hours)—50 marks.

Simple rules, easy factors, highest common factor and least common multiple (both as far as solvable by easy factorization), simple fractions, simple simultaneous equations with not more than two unknown quantities (not involving literal co-efficients), easy numerical quadratic equations by factorization, easy problems on the above types of equations, square root, use of squared paper for plotting graphs of $y=ax+b$, and $y=kx^n$ a, b, k, n , to be given numerical values (n an integer), graphical solution of simple simultaneous equations, elementary ratio, proportion and variation.

O. 188.

GEOMETRY.

ONE PAPER—(Two hours)—50 marks.

The questions in Practical Geometry shall be set on the constructions contained in Schedule A together with easy extensions of

them as riders if desired. A candidate should provide himself with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a set square, a protractor, compasses and a hard pencil.

All figures should be drawn accurately.

The questions on Theoretical Geometry shall consist of theorems contained in Schedule B, together with questions upon these theorems, easy deductions from them, and arithmetical illustrations. Any proof of a proposition shall be accepted which forms a part of any systematic treatment of the subject; the order in which theorems are stated in Schedule B is not imposed as the sequence of the treatment.

The use of intelligible abbreviations is recommended.

Schedule A.

Bisection of angles, of straight lines and arcs of circles.

Construction of perpendiculars to straight lines.

Construction of an angle equal to a given angle.

Construction of parallels to a given straight line.

Simple cases of construction of triangles from sufficient data.

Division of straight lines into a number of equal parts.

Construction of tangents to a circle.

Construction of regular figures of 3, 4, 6, 8 sides in or about a given circle.

Description of a circle in or about a triangle and a square.

Description of a segment of a circle on a given straight line containing a given angle.

Schedule B.

Angles at a point.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

Parallel straight lines.

When a straight line cuts two other straight lines, if

(i) a pair of alternate angles are equal, or

(ii) a pair of corresponding angles are equal, or

(iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles,

then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

Triangles and Rectilinear Figures.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by these sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

Areas.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Geometrical representations of the following algebraical identities:—

$$\begin{aligned} k(a+b+c) &= ka+kb+kc+ \\ (a+b)^2 &= a^2+2ab+b^2; \\ (a-b)^2 &= a^2-2ab+b^2; \\ a^2-b^2 &= (a+b)(a-b). \end{aligned}$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse, right or acute. The difference in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other,

In any triangle the sum of the squares on the two sides is equal to twice the square on half the base, together with twice the square on the median which bisects the base.

The Circle.

A straight line drawn from the centre of a circle to bisect a chord which is not a diameter is at right angles to the chord ; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles or in the same circle, (i) if two arcs subtend equal angles at the centres, they are equal ; (ii) conversely, if two arcs are equal they subtend equal angles at the centres.

In equal circles or in the same circle, (i) if two chords are equal, they cut off equal arcs ; (ii) conversely, if two arcs are equal the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre ; and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to one another.

If two tangents are drawn to a circle from an external point,

- (i) the tangents are equal ;
- (ii) they subtend equal angles at the centre of the circle ;
- (iii) they make equal angles with the straight line joining the given point to the centre.

If two circles touch, the point of contact lies in the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal ; and, if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semi-circle is a right angle ; the angle in a segment greater than a semi-circle is less than a right angle ; and the angle in a segment less than a semi-circle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary ; and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle, the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other ; and the converse.

The three medians of a triangle meet in a point. (*centroid.*)

The internal bisectors of the angles of a triangle meet in a point. (*incentre.*)

The perpendicular bisectors of the sides of a triangle meet in a point. (*circumcentre.*)

The perpendiculars of a triangle meet in a point. (*ortho-centre.*)

O. 189.

GEOGRAPHY.

ONE PAPER—(Three hours)—75 marks.

The earth as a heavenly body :—Its shape and size, how ascertained ; observations of the daily movements of the sun and other heavenly bodies and their explanation by the rotation of the earth ; rotation and longitude ; Greenwich time and Indian standard time ; latitude ; the inclination of the planes of rotation and revolution ; effects of vertical and slanting rays of the sun ; the seasons ; zones of the earth. The moon ; the phases of the moon ; the eclipses and the tides. Knowledge of the Hindu, Mahomedan and Christian Calendars.

Elements of map reading, including practical exercises based on map-study and interpretation of maps, orographical, climatic, economic, etc.

Land and water : Continents and oceans ; world ridges and water sheds : formation of mountains ; earthquakes, volcanoes, geysers and hot springs ; erosion and denudation ; land and water forms.

Climate : Temperature ; atmospheric pressure ; winds ; and rainfall. Isotherms and Isobars. Ocean currents and their influence on climate. Easy exercises on the application of the principles governing climate.

Vegetation and Animal Life : Types of vegetation and animal life and their distribution as influenced by climate.

Natural regions of the world.

Physical influences on economic development : Position, coast, natural formation, climate, soil and mineral deposits as affecting plant and animal life, human occupations and settlements, and means of communication ; conditions of agriculture, manufacture and commerce ; growth of towns and lines of communication ; railways, water-ways, and irrigation.

Detailed study of India and the British Empire : the study to include—

Natural divisions, the character of the coast and the position of plains, plateaus, highlands, mountains, river systems, and lakes, as affecting the occupations and settlements of the inhabitants, the growth of towns and ports and the lines of communication.

Climate and its influence on natural products and the life and habits of the inhabitants ;

Natural resources, principal vegetable and animal products, and the distribution of minerals ;

Principal industries, chief exports and imports, trade routes by land and by sea ;

Political divisions and their relation to natural divisions, chief cities, and forms of Government.

General study of the rest of the world on the above lines.

[*Note.*—Wherever necessary, candidates should draw simple sketch maps as integral parts of their answers.]

O. 190.

HISTORY

ONE PAPER—(Three hours)—75 marks.

[*N. B.*—There will be more questions in the paper than are required to secure full marks.]

HISTORY OF ENGLAND.

[*N. B.*—Minute details of wars, treaties, statutes, plots, etc., should be omitted.]

1. The Tudor Period—The Reformation, the growth of the Royal power, and the beginning of England's naval supremacy.

2. The Stuart Period—The struggle against absolute monarchy, the Revolution, and the settlement of the constitution after the Revolution.

3. The Hanoverian Period—(only up to 1900)—with special reference to the growth of Parliamentary institutions and relations with the chief European Powers.

4. The British Constitution—The prerogatives of the Sovereign. The three estates of the Realm. The present composition, constitution, and powers of the House of Lords and the House of Commons. The Cabinet.

HISTORY OF INDIA.

1. Ancient India—Elementary knowledge of such topics as the Vedic Age, the Epic Age, the expansion of Hindu power, Buddha, the Maurya and the Gupta Dynasties, the Buddhistic Age, and the Puranic Age.

2. The Mogul Period.*

3. The Mahratta Period.*

4. The British Period* (only up to 1900).

5. The Present Administration of India. Elementary knowledge of—

(a) The Secretary of State and his Council.

(b) The Viceroy and Governor-General. His Executive Council. The Central Legislature.

(c) The Provincial Governments. Provincial Legislative Councils.

(d) Maintenance of internal order. The Magistracy and Police.

(e) The Administration of Justice.

(f) Chief Sources of Revenue and Heads of Expenditure—Central and Provincial.

(g) Local Self-Government.

(h) The Indian States.

*With special reference only to great men and important events with their causes and results. Minute details of wars, treaties, statutes, etc. should be omitted.

O. 191.

PHYSICS AND CHEMISTRY

ONE PAPER—(Two hours)—75 marks.

1. The syllabus is such as can be taught in three academic years with three periods of 45 minutes per week devoted to it.

[The way in which the Physics syllabus may be handled for teaching purposes is indicated in "B" from page 116 to page 119.

For guidance and convenience in teaching, the whole syllabus is tentatively divided into certain number of lessons.]

2. Teachers are permitted to group together practical exercises so as to secure co-ordination between the theoretical and practical exercises in different sections.

3. Teachers are at liberty to teach any portion at any time during the period of three years but in order to secure co-ordination between different schools it is recommended that the following plan be adopted.

V Standard.

Sound, Light, Magnetism and Electricity, with related practical exercises.

VI Standard.

Mechanics, General Properties of Matter and Heat with related practical exercises.

VII Standard.

Chemistry with practical exercises and revision of Physics.

4. Heads of Schools are expected to see that students keep a record of the practical exercises performed by them.

"A" (FOR REFERENCE).

*Mechanics.**Measurements—*

Length.—Callipers.

Area.—By calculation and weighing.

Volume.—By calculation and by displacement.

Angle.—Protractor.

Mass.—Weighing balance, difference between mass and weight.
Method of weighing correctly, using incorrect balance.

Time.—Solar day and its parts. Clocks, how they work, pendulum and its isochronism. Relation between length and time of vibration of a pendulum.

Dynamics—

Motion, velocity, rate of change of velocity (acceleration).
Composition of velocities, Momentum, rate of change of momentum. Force, action and reaction. (The three laws of Motion.)

Work, power, energy, different forms of energy, conservation of energy.

Circular motion and its peculiarities.

Statics.—

Equilibrium, stable and unstable; centre of gravity. Lever and the law of moments.

Weighing machine.

Pulley—fixed and movable. Principle of work. Inclined plane. Jack screw.

Friction and its nature. Brakes—Resistance.

Mechanism for changing circular motion into linear and *vice versa* in the case of machines. Gears.

General properties of matter.

Three states of matter and their distinguishing peculiarities.

Solids.—Hardness, Brittleness, Elasticity, Tenacity, Ductility and Malleability. Density and relative density. Springs and bending of the beam. Spring balances, Buffers.

Liquids.—They find their own level, fountains, water-supply of cities. The liquid pressure and its nature. Transmissibility of pressure. Effect on a body immersed partly or wholly. Density, Hydrometers. Flow of water and its energy. Jets of water, continuous and broken. (Water turbine.)

Gases.—The atmosphere and its pressure. Barometer (Mercury). Aneroid barometer. Air pump (simple). Boyle's Law. Siphon. Tantalus cup. Water pump (suction and force). Ink filler.

Heat.

Temperature. Thermometer (Centigrade and Fahrenheit). Clinical thermometer. Thermographs.

Expansion due to heat in solids, liquids and gases.

Quantity of heat and unit of heat or calorie. Latent heat of liquefaction and vaporization. Different methods of cooling.

Manufacture of ice. Evaporation and boiling. Boiling point of liquids, and its relation to pressure on the liquids. Papin's digester. Melting point. Change of volume when ice melts. Dew and its formation. Clouds. Rain and its measurement. Conduction of heat. Different conductivities of different substances. Davy's safety lamp. Convection. How it takes place in liquids and gases. Heating of water. Winds, land and sea-breezes. Ventilation. Use of chimneys for lamps. Radiation—its effect on polished and rough surfaces. Vacuum flask.

Heat, a kind of energy. Its change into mechanical work. Steam engine. Oil engine. Their rough construction and working, including the use of valves, cams, fly-wheel and governor.

Sound.

Noise and musical sound. Air, the carrier of sound. A musical note is the result of the co-operation of a rapidly vibrating body and an enclosed hollow space, *e.g.*, notes produced by Harmonium, Veena, Satar, Mono-chord, Drum, Flute, Human voice. Spherical nature of the sound wave as compared with the waves on the surface of water which are circular. Reflection of sound waves—echoes. Multiple echoes, Whispering galleries—Human ear. Phonograph (elementary treatment).

Light.

Reflection. Kaleidoscope. Periscope. Law of Reflection. Concave mirrors. Reflectors. Multiple images.

Refraction, Prism. Lens. Stereoscope. Focus. Decomposition of white light.

Eye. Photographic camera. Short and long sight.

Simple microscope. Simple telescope. Optical lantern. Cinematograph (elementary).

Magnetism.

Loadstone. Magnetic needle. Earth a magnet. Mariner's Compass. Like and unlike poles. Attraction and repulsion. Magnetic induction. Electro-Magnets. Permanent and temporary Magnets. Lines of force.

Electricity.

Electricity produced by friction. Electroscope. Attraction and repulsion. Induction. Electricity resides on surfaces. Discharge through points. Sparking. Conductors and non-conductors. (Omit condensers and construction of electric machines.)

Current electricity. Difference of electric levels. Simple cell. LeClanche's cell. Dry cell. Accumulator. (Omit Daniel, Bunsen and Dichromate cell.) Electric circuit. What supplies the energy for the flow. Current detector. (Omit voltmeters, ammeters, and different types of galvanometers.) Resistance and its effects on a current.

Effects of electric current. Incandescent lamp; arc lamp: Heating apparatus.

Magnetic properties of a coil carrying current: induced currents; simple dynamo; electric bell; Morse instrument. (Elements only; avoid constructional details.)

Bell's Telephone.

*"B" (FOR TEACHING)**Physics—Theoretical.*

1. Archimedes. Upward pressure of water, floating bodies, use of hydrometers (variable immersion), density and relative density.

2. Liquids in communicating vessels: fountains; water-supply to cities. (Omit capillary tubes and Bramah's Press.)

3. Galileo, Torricelli and Pascal. Pressure of air. Pressure of air on high mountains. Density of air at great heights. Ascent of Mt. Everest. Mercury barometer. Aneroid barometer. Effect of pressure on boiling liquids.

4. Ink filler ; a syringe ; suction pump ; kerosene oil pump ; cycle pump. (Omit the force pump with an air barrel.)

5. Von Guericke. Air pump. (Omit discussion regarding different types of air pumps.) Magdeburg hemispheres ; effect of the reduction of pressure on a barometer placed in vacuum. Baroscope. Vacuum does not carry sound.

6. Boyle. Relation between P and V . Distinction between pressure exerted by solids, liquids and gases. Elementary idea of Kinetic Hypothesis.

7. Air cushions, pneumatic tyres, vacuum post, football, siphon (ordinary and intermittent). Vacuum fountain, Hero's fountain, intermittent fountain, Primus stove ; (detailed explanation is not expected).

8. Elasticity, spring balance, buffers, bending of beams, spring board.

9.* Count Zeppelin and Wright Brothers, Balloons, Aeroplanes, Cartesian Divers, Submarines, Parachutes, Diver's Dress. (The treatment should be elementary and popular.)

10. Newton. Motion ; Average speed, Velocity, Composition of velocities ; Circular motion (sling).

11. Acceleration, momentum, force ; Inertia ; Parallelogram of forces ; Action and reaction are equal and opposite ; Work, Power, Energy, Law of conservation of energy, Friction, Brakes.

12. Lever, law of moments ; Balance ; Pulley, fixed and moveable. Inclined plane, applications of the Screw, Jack, etc. Change of linear motion into circular and *vice versa* in machinery. Gearing.

13. Centre of gravity. Tower of Pisa ; Rocking Pagoda, Rope-walker, heavy bottoms of hydrometers, ballast in ships ; Rocking toys.

14. Pendulum. Isochronism. Toothed wheel and escapement. Working of a pendulum-clock.

15. Fahrenheit and Centigrade thermometers. Clinical thermometer. Thermograph. (Omit Six's and Reaumur's thermometers as also the discussion of the construction of thermometers, errors in fixed points and the choice of liquids.)

16. Expansion due to heat and its effects. Fixing tyres to wheels. Bursting of pneumatic tyres by heat. Unequal expansion of different solids and liquids. Expansion of gases. (Omit co-efficient of expansions as also the exceptional behaviour of water.) Sudden heating or cooling of glass vessels. Effect of heat on the pendulum and densities of substances.

17. Capacities of substances for heat, (avoid the discussion of Specific Heat), measurement of calories ; Heat becomes latent when substances melt or vaporize. Evaporation and consequent lowering of temperature. Change of volume when ice melts, Papin's Digester. Dew-Point.

* Not for examination.

18. Three states of matter ; artificial cooling ; cooling mixtures ; *Cooling by sudden expansion ; *Manufacture of ice ; *Liquefaction of air.

19. Davy. Safety Lamp. Conduction and convection ; land and sea breezes ; Monsoons ; ventilation ; use of chimneys for lamps and factories. Vacuum flasks ; Radiation ; Effect on polished and rough surfaces. The reason why mountain tops are covered with snow.

20. Watt and Stephenson. Steam engine ; Petrol engine ; Oil engine ; D-valve ; the exhaust valve ; the crank and the eccentric ; the fly-wheel ; the governor. (Omit other constructional details.)

21. Joule and Rumford. Heat produced by friction or mechanical work ; heat a kind of energy. Transformation of energy ; conservation of energy. *Principle of hydro-electric works. (Omit Mechanical Equivalent of heat.)

22. Reflection of light from plane and spherical mirrors ; multiple images ; Kaleidoscope ; Parallel mirrors. Periscope. Relation between the distances and the sizes of images and objects to be demonstrated but not to be calculated mathematically. Principal Focus ; Search light Reflectors ; Reflexion of sound, echoes, multiple echoes ; whispering galleries.

23. Refraction of light. (Omit sine law and refractive index) ; Prism and lenses. (Omit mathematical treatment of the relation between the distances and the sizes of the images ;) Stereoscope. Decomposition of white light. *Refer to rainbow.

24. The photographic camera ; the human eye ; long and short sight ; (Omit astigmatism.)

25. The simple microscope ; compound microscope ; simple telescope and optical lanterns. Cinematograph (elementary treatment).

26. Loadstone ; Magnetic needle ; Earth a magnet ; Mariner's Compass ; Like and unlike poles ; attraction and repulsion ; Magnetic induction.

27. Electro-Magnets : permanent and temporary magnets ; lines of force. (Omit methods of magnetisation.)

28. Electricity produced by friction ; Electroscope ; Attraction and repulsion ; Induction ; Electricity resides on surfaces ; Discharge through points. Sparking ; conductors and non-conductors. (Omit condensers and construction of electric machines.)

29. Current electricity ; difference of electric levels ; simple cell, LeClanche's cell, dry cell ; Accumulator. (Omit Daniel, Bunsen and Dichromate Cells.) Electric circuit. What supplies the energy for the flow. Current detector. (Omit voltameters, ammeters, and different types of galvanometers.) Resistance and its effects on a current.

30. Effects of electric current. Incandescent lamp ; arc lamp ; heating apparatus.

31. Magnetic properties of a coil carrying current ; induced currents, simple dynamo ; electric bell ; Morse instrument. (Elements only ; avoid constructional details.)

32.* The human ear ; Bell's telephone. Phonograph (Elementary treatment.)

* Not for examination.

Physics—Practical Work

1. To find the loss in weight of a regular solid suspended in water and to verify by measurement and calculation that the loss is equal to the weight of an equal volume of water.
2. To determine the density of regular solids by measurement and that of irregular solids heavier than water by loss of weight in water.
3. To find the weight of unit volume of kerosene or a salt solution.
4. To find how many inches of water will balance one inch of kerosene.
5. Relation between the load and the extension of an elastic body.
6. Bending of a beam. Relation between deflection and weight.
7. Centre of gravity of a parallelogram and a triangle.
8. Boyle's Law.
9. Lever ; laws of moments.
10. To compare the readings of the Fahrenheit and Centigrade thermometers and to find the relation between them by a graph.
11. To observe the rise in the boiling point of a liquid as a solution becomes more concentrated.
12. To observe the lowering of the melting point of ice when a salt is mixed with it.
13. To prove the law of reflection.
14. To determine the focal length of a convex lens, by a sunlight, or an object at a great distance.
15. To study the attraction and repulsion between two magnets.
16. To study the attraction and repulsion between two electrified bodies.
17. To study the lines of force of a simple magnet and a pair of magnets.
18. To study the heating effect of an electric current.
19. To study the use of a fuse in an electric circuit.
20. To study the effect of heating a magnetized needle.
21. To fit an electric bell.

Chemistry—Theoretical.

1. Solutions and solubility in water and other solvents ; separation of substances by solution. (Omit solubility curves.)
2. Crystals and crystallization ; separation of materials by crystallization.
3. Elements and compounds (Use of symbols and formulæ is allowed but not expected).
4. Combustion and the necessity of air combustion. Rapid and slow combustion.

5. Gain in weight during burning and reaction of oxygen in combustion. Combustion is oxidation.
6. Lavoisier and Priestley. Preparation, properties and uses of oxygen. Basic and acidic oxides ; acids, bases and salts.
7. Water and its composition (qualitative), properties of water, natural waters, purification of water, water for drinking purposes, hard and soft water.
8. Carbon, forms of carbon, combustion of carbon, flame, oil lamp, different types of lamps based on the combustion of carbon-containing materials.
9. Compounds of carbon. Carbon dioxide and carbonates.
10. Calcium carbonate, lime, mortar, cement, wood ashes, sodium carbonate (washing soda), soap.
11. Sulphur, changes on heating, burning of sulphur, sulphur dioxide, sulphuric acid, nature of acid. (Omit manufacture of sulphuric acid.)
12. Phosphorus, burning of phosphorus, safety matches.
13. Nitrogen, compounds of nitrogen—nitric acid, ammonium chloride, ammonia, sulphate of ammonia. Nitrogen : a component of air.
14. Study the general nature and uses of :—
 - Tin, lead and white lead. Zinc and zinc oxide.
 - Aluminium, alum, clay, bricks.
 - Quartz, sand, glass.
 - Iron, Jamshedpur Iron Works, green vitriol.
 - Copper and blue vitriol. Mercury and calomel.
 - Alloys, electroplating.
 - Common salt, plaster of Paris, chlorate of potash, permanganate of potash.
 - Bleaching, chlorine and iodine.
 - Starch, sugar, alcohol.
 - Acetic, citric and tartaric acids.

Chemistry—Practical Work.

1. To purify common salt obtained from bazaar.
2. To prepare fresh water from salt water.
3. To separate alum and copper sulphate by crystallization.
4. To heat pieces of wood in a crucible covered with sand and to examine the contents before and after cooling.
5. To examine the flame of a candle and compare it with that of a spirit lamp.
6. To examine the products of combustion of a burning candle and compare them with those obtained in your exhalation.
7. To heat separately some zinc, magnesium, and sulphur in an open crucible and to notice the change.

8. To notice the change when a piece of copper, previously heated, is dropped in a test tube containing methylated spirit.
9. To test the properties of oxygen.
10. To prepare carbonic acid gas by means of chalk and hydrochloric acid and to examine its properties.
11. To heat strongly a piece of chalk and to examine the quick-lime obtained, and to study the properties of its solution in water.
12. To find the effects of an acid on an alkali and to test the nature of the product.
13. To obtain metallic lead from lead oxide.
14. To bleach (*i*) a coloured piece of cloth with the help of bleaching powder, and (*ii*) a coloured flower with the solution of sulphur dioxide and water.
15. To study the effect of soap on hard and soft waters.
16. To examine the properties of kerosene oil, petrol, and alcohol; their volatile nature; use as solvents; effect of ignition, etc.
17. To study the composition of water by electrolysis.

O. 192.

BOTANY AND ZOOLOGY.

ONE PAPER—(Two hours)—75 marks.

General.

1. Characteristics of living and non-living things.
2. Fossil plants and animals (the meaning of the term), how plant and animal fossils are formed and the light they throw on the history of the plant and animal Kingdoms.

I. Botany.

1. Parts of the body of a typical plant (root, stem, leaf, bud, flower, fruit and seed and their uses: striking modifications of these to serve special purposes).
2. Internal structure of plant parts (root, stem and leaf).
3. Life-histories of an annual (*e.g.*, Cucumber), a biennial (*e.g.*, Carrot), and a perennial (*e.g.*, Mango) plant, to illustrate the process of germination, nutrition, growth, movement and reproduction in ordinary plants.
4. Plants showing differences in one or more particulars from the typical plants mentioned previously—A Gymnosperm (Cycad), a Fern, a Moss or Liverwort, a Mould or Mushroom, an Alga (Spirogyra) and a Bacterium. The different degrees of organization of the plant body shown by this series.
5. Classification of plants—Flowering and Flowerless—and the sub-divisions of these into Monocotyledons, Dicotyledons, Gymnosperms, Pteridophytes, Bryophytes and Thallophytes. Meaning of the terms Natural Order, Genus and Species to be explained by the study of the following plants:

Cotton, *Bhendi*; Orange, Lemon; Pea, Gram; Sunflower, Marygold; Brinjal, Chillie, Cocoanut, Areca nut; Rice, Wheat; *Tulsi*, *Subja*.

6. Plants in their natural habitats ; factors (water, light, air and soil) influencing growth of plants ; adaptations of structure and mode of nutrition shown by Hydrophytes, Halophytes, Xerophytes, Parasites, Epiphytes, and Insectivorous plants. Means of seed-dispersal.

Practical Work.

Demonstration experiments by the teacher to show differences between living and non-living*things ; drawing and description of parts of the plant body ; internal structure of plant parts to be demonstrated by the teacher ; observations on life-histories of the annual, biennial and perennial plants mentioned in the theoretical part ; simple experiments to illustrate conditions of germination, nutrition, growth, movement and reproduction to be demonstrated by the teacher.

Observations on such portions of the life-histories of the different kinds of plants (other than ordinary plants) as are possible without special apparatus ; description of the plants mentioned in connection with the classification of plants.

Observations on adaptations shown by plants to different habitats.

TEXT-BOOKS RECOMMENDED.

Botany.—M. J. LEGOC—Introduction to the Tropical Botany.
J. PFLEIDERER.—Glimpses into the life of Indian Plants.
M. C. STOPES.—The study of Plant Life.

II.—Zoology.

1. General Characters of Vertebrates.

Synopsis of Vertebrates.

2. General Characters of the Mammals.

Synopsis of the Mammals.

The life-history of (1) Orangutan. (2) Cat. (3) Hyæna. (4) Dog. (5) Wolf. (6) Bear. (7) Bat and Flying Fox. (8) Hedgehog. (9) Squirrel. (10) Mouse. (11) Porcupine. (12) Hare. (13) Elephant. (14) Pig. (15) Ox. (16) Deer. (17) Camel. (18) Horse. (19) Whale. (20) Ant-eater. (21) Kangaroo.

3. General Characters of the Birds.

Synopsis of the Birds.

The life-history of (1) Kite. (2) Vulture. (3) Barn-owl. (4) Woodpecker. (5) Cuckoo. (6) Crowpheasant. (7) Kingfisher. (8) Hoopoe. (9) Parrot. (10) Sparrow. (11) Weaver-bird (Baya). (12) Honey-Sucker. (13) Wagtails. (14) Magpie Robin. (15) Maina. (16) Oriole. (17) King Crow. (18) Indian Bulbul. (19) Babblers. (20) Crow. (21) Pigeon. (22) Hen. (23) Peacock. (24) Partridge. (25) Ostrich. (26) Stork. (27) Heron. (28) Crane. (29) Duck. (30) Flamingo. (31) Pelican. (32) Sea gull.

4. General Characters of the Reptiles.

Synopsis of the Reptiles.

The life-history of (1) Gecko. (2) Blood-sucker. (3) Chameleon. (4) Snake. (5) Crocodile. (6) Tortoise.

5. General Characters of the Amphibians.

Synopsis of the Amphibians.

The life-history of the Frog. The points of difference between the Frog and the Toad.

6. General Characters of the Fishes.

Synopsis of the Fishes.

The life-history of (1) Shark or Dog-fish. (2) Skate or Ray. (3) Eel. (4) Mullet. (5) Sole-fish. (6) Sea horse.

7. General Characters of Invertebrates.

Synopsis of the Invertebrates.

8. General Characters of the Articulated Animals.

Synopsis of the Articulated Animals.

9. General Characters of the Insects.

The life-history of (1) Butterfly. (2) Moth. (3) Rhinoceros. (4) Honey-bee. (5) Wasp. (6) Ant. (7) Housefly. (8) Mosquito. (9) Flea. (10) Bed-bug. (11) Grasshopper. (12) Cricket. (13) Mantis. (14) Cockroach. (15) Dragon-fly. (16) Termite.

10. The life-history of (1) Centipede. (2) Millipede. (3) Spider. (4) Scorpion.

11. General Characters of the Crustaceans.

The life-history of (1) Lobster. (2) Prawn. (3) Crab. (4) Hermit-crab.

12. The General Characters of the Molluscs.

Synopsis of the Molluscs.

The life-history of (1) Snail. (2) Bi-valve. (3) Cuttle-fish.

13. The General Characters of the Worms.

Synopsis of the Worms.

The life-history of (1) Earthworm. (2) Leech. (3) Round-worm. (4) Flatworm.

14. The General Characters of Spiny-skinned Animals.

The life-history of (1) Starfish. (2) Sea-urchin. (3) Featherstar.

15. A general acquaintance with the life-history of (1) Jellyfish. (2) Corals. (3) Sea-anemone. (4) Sponges. (5) Unicellular Animals (Amoeba, Paramoecium, Vorticella).

Practical Work.

Candidates should be able to recognise the prescribed animals from their external structure only. The complete life-history including the external and internal structures of (1) Rabbit, (2) Pigeon, (3) Frog, (4) Fish, (5) Cockroach, must be studied.

TEXT-BOOKS RECOMMENDED.

Zoology.—J. PFLEIDERER.—Zoology (A book for Indian Students).

W. RAE SHERRIFFS.—Zoology for Secondary Schools in India.

O. 193.

PHYSIOLOGY AND HYGIENE.

ONE PAPER—(Two hours)—75 marks.

Physiology and Hygiene.—One paper of 75 marks, containing short questions on Human Anatomy and Physiology and Hygiene to be answered in two hours. Eight questions to be set, of which five only are to be answered. 30 marks to be reserved for Anatomy and Physiology. 45 marks to be devoted to Hygiene with special questions on ventilation, germs, parasites, air and water-borne diseases, value of different articles of food, cleanliness, open air exercise and the like.

Anatomy.—Bones; joints; muscles; skin; brain and nerves; lungs and wind-pipe; heart and blood vessels; salivary glands; stomach; intestines; liver, spleen; kidneys; eyes; ears; and nose.

Physiology.—Digestion in mouth, stomach, small and large intestines—absorption of food, Metabolism.

Blood, lymph—Heart and circulation.

Respiration. Animal heat. Skin. Kidneys and excretion.

Nervous system including the autonomic system. Sight, Hearing, Speech and Touch.

Hygiene.—*Water Supply*:—Sources—Common Impurities. Diseases commonly conveyed by water. Domestic purification.

Air and Ventilation:—Composition of Air. Impurities—Effects of overcrowding, Cubic space, Methods of ventilation—Effects of ventilation on health and disease.

Light:—Provision and necessity of—; Effect on health and disease.

Exercise, Clothing and Personal Hygiene.—*Food*:—Value of different articles of diet—Diseases commonly conveyed by food. Protection of food. Effects of alcohol.

Infectious Diseases.—Common Infectious and Epidemic Diseases including those of the Eye and Skin. Outline of signs and symptoms. Modes of infection. The spread of disease by flies, mosquitoes and parasitic insects. Disinfection—Antiseptics, Cleanliness.

O. 194.

DOMESTIC SCIENCE.

ONE PAPER—(Two hours)—75 marks.

[Eight questions to be set of which only five are to be answered. Not more than 3 questions to be set on each of the sections I, II and III.]

I.—Elements of Physiology and Hygiene :—

Animal and vegetable cells, the human skeleton. The muscles and their mode of action. The heart. The blood and its circulation. Respiration and the production of heat in the body. Digestion ; Secretion and excretion. Glands. Sense organs, nervous system.

Air and ventilation. Water : its impurities, purification, storage, distribution. Different kinds of filters. Wells, tanks and rivers.

Food and its composition. Detailed study of chief food stuffs and beverages. Sugar, milk and its products ; fats and oils ; different kinds of grain and pulses, bread, meat, meat extracts, vegetables, fruit, eggs and condiments, tea and coffee. Errors of diet. Principal changes taking place in the preparation of foods. Preservation and sterilisation of food stuffs. Yeasts, moulds, and bacteria as affecting household work.

Personal Hygiene :—Cleanliness, bathing, clothing, exercise, sleep, good and bad habits, temperance. Evils of alcohol, tobacco and opium.

Diseases and germs. Infectious and contagious diseases, small-pox, measles, typhoid, plague, cholera, influenza, malaria, tuberculosis, diphtheria, dysentery, common skin diseases such as ringworm and itch ; Symptoms, prevention and treatment. Vaccination. Inoculation. Disinfection.

II.—Management of a Home :—

Houses—Choice of the site.

Methods of whitewashing, cleaning, sweeping, dusting and arranging a house. Heating, cooling, lighting, and sanitary arrangements. Methods of removal and disposal of waste water and refuse. Choice and care of household articles. Household pests.

Kitchen, cooking utensils.

Cookery—different processes.

Choice and care of clothing, household fabrics, *e. g.* silk, cotton, wool and linen. Laundry work. Removal of stains.

Household accounts. Management of money ; Savings Bank. Banks and Cheques. Insurance.

III.—Home Nursing, First Aid, and Care of Infants :—

The sick room, its furniture and appliances ; management of the sick room and of the patient's bed. General rules for treatment of patients. Invalid Cooking. Ordinary ailments, *e. g.* indigestion, diarrhoea, constipation, vomiting, colds, and fevers, etc., and their treatment.

Use of a few household medicines and medical appliances, *e. g.* tincture iodine, quinine, castor oil, carbonate of soda, boric powder, permanganate of potash, eucalyptus oil, vaseline, carron oil, cotton, wool, lint and bandages.

Emergent ailments—First aid in cases of fainting, apoplexy, sunstroke, bleeding, broken bones, wounds, snake bite, dog

bite, stings of insects, poisoning, drowning, suffocation, electric shock, burns and scalds. Treatment of foreign bodies in the eye, ear, nose and throat.

General management of infants—Cleanliness, bathing, clothing, food, sleep and exercise. Infant ailments, *e. g.* vomiting, convulsions, diarrhoea, constipation, wasting, rickets, adenoids, tonsils, teething, whooping cough. Preparation of food for infants.

Practical Work.

The candidate must produce a certificate from the Head of a Registered School that she has satisfactorily carried out during the year in which she appears for the examination or in the previous year the practical courses in First Aid and in *any one* of the groups (a), (b) and (c) as prescribed below :—

(a) Needle work—

Cutting out and making two simple garments, one for a child and one for a woman. One of these two must be hand sewn.

(b) Laundry Work—

Washing of cotton, wool and silk articles, blueing, ironing and folding. The removal of stains.

One garment of each of the three fibres to be laundered.

(c) Cookery—Preparation of the following dishes :—

- (1) One milk dish, *e. g.*, curds, cheese, butter, chhas.
- (2) One kind of bread.
- (3) One kind of rice.
- (4) One vegetable dish.
- (5) One meat or pulse dish.
- (6) One sweet dish.

Estimate of the cost of dishes.

[*N. B.*—It is desirable that candidates offering Domestic Science should be familiar with Elementary Physics and Chemistry.]

BACHELOR OF ARTS.

GENERAL.

- O. 195.** Candidates for the Degree of Bachelor of Arts must have passed the Matriculation Examination, and will be required to pass two subsequent examinations, the first to be called the Intermediate Examination in Arts, and the second the Examination for the Degree of Bachelor of Arts. Texts and periods of study will from time to time be prescribed by the Academic Council, and text-books recommended by it where it is deemed desirable.

CHAPTER II.—FIRST YEAR'S COURSE IN ARTS.

- O. 196.** During the first year, there is no University examination for a candidate proceeding to a Degree in Arts. Such a candidate will be permitted at the end of the first year to enter on a course for the Intermediate Examination in Arts; Provided that he produces a certificate

from the Principal of an Arts College showing that he has satisfactorily carried out the work appointed by the University for the first two terms in Arts.

O. 197. Heads of Colleges are empowered to charge for each candidate who applies to be examined a fee of not more than Rs. 10. The Head of each College shall also collect and forward to the Registrar of the University a fee of Rs. 10 for each candidate who has been certified and shall submit the names of all candidates who have been certified in accordance with the above Ordinance (Ordinance 196) and the names of such candidates shall be registered by the University.

R. 6. The following are the subjects appointed by the University for the first two terms in Arts:—

- I.—English.
- II.—Second Language.
- III.—Mathematics.
- IV.—Elementary Physical Science.

Syllabus.

R. 7. I.—ENGLISH.—Three papers.

There shall be three papers of two hours each, two on prescribed texts carrying 100 marks each, and one for Composition carrying 100 marks also, which shall comprise an essay carrying 50 marks and exercises in Composition based upon books prescribed for general reading which shall test the candidate's power of writing correct and idiomatic English. The Academic Council, on the recommendation of the Board of Studies, will prescribe texts before the commencement of the course for a particular year.

Each student should write at least 12 exercises in English Composition in class to the satisfaction of his teacher during the year. Each College should keep a record of these exercises and the marks obtained in them for the purposes of inspection by the Inspection Committee of the University.

R. 8. II.—SECOND LANGUAGE.—One Paper.

One of the following :—

Sanskrit.	Latin.	Arabic.	Avesta and	Persian.
Greek.	Hebrew.	French.	Pahlavi.	German.
	Ardha-Magadhi.*	Pali.†	Portuguese.	

Candidates will be examined in books prescribed by the Academic Council on the recommendation of the Board of Studies.

*Subject to the condition that a candidate taking this language has passed in Sanskrit at any preceding examination conducted or recognized by this University.

The Syndicate have authorized the Principals of Arts Colleges to examine such of their students in Sanskrit as are proposing to offer Ardha-Magadhi at the First Year Arts Examination but have not passed in Sanskrit at the Matriculation Examination.

†Subject to the condition that a candidate taking this language has passed in Sanskrit or Pali at any preceding examination conducted or recognized by this University.

The paper in the Second Language will contain unseen passages for translation both out of that language into English and *vice versa*, and such passages shall together carry at least 30 per cent. of the total marks. It will also contain questions in Grammar, as well as in the matter of the books prescribed (including passages for translation and explanation).

R. 9.

III.—MATHEMATICS.—Two Papers.

Details of the courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

Algebra—One Paper.

Indices, surds, simultaneous equations involving quadratics and graphical illustrations. Quadratic expressions and graphs. Progressions. Simple Permutations and Combinations. Logarithms with application to Interest. Summation of squares and cubes of natural numbers. Binomial theorem for positive integral index.

Geometry treated in conjunction with Trigonometry of one angle.—One Paper.

The questions in Practical Geometry shall be set on the constructions contained in Schedule A together with easy extensions of them as riders if desired. A candidate should provide himself with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a set square, a protractor, compasses and a hard pencil. All figures should be drawn accurately.

The questions on Theoretical Geometry shall consist of theorems contained in Schedule B, together with questions upon these theorems, easy deductions from them and arithmetical illustrations. Any proof of a proposition shall be accepted which forms a part of any systematic treatment of the subject; the order in which the theorems are stated in Schedule B is not imposed as the sequence of the treatment. Proofs which are only applicable to commensurable quantities shall be accepted. The use of intelligible abbreviations is recommended.

SCHEDULE A.

Division of straight lines into parts in any given proportions.

Construction of a triangle or a square equal in area to a given polygon.

Construction of common tangents to two circles.

Simple cases of the construction of circles from sufficient data.

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.

Construction of a regular pentagon.

Description in a given triangle of a triangle similar and similarly placed to another given triangle.

Description of squares in a triangle.

SCHEDULE B.

Proportion : Similar Triangles.

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally ; and the converse.

If two triangles are equiangular, their corresponding sides are proportional ; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

If two triangles have one angle of the one equal to one angle of the other and the sides about another angle of each proportional, the sides opposite to the equal angles being homologous, the third angles of the triangles are either equal or supplementary.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

In a right-angled triangle the perpendicular drawn from the right angle to the base will divide the triangle into two parts which are similar to the whole and to each other.

If an angle of a triangle be bisected by a straight line which cuts the opposite side, the sum of the rectangle contained by the two segments of that side and the square on the bisecting line is equal to the rectangle contained by the other two sides of the triangle.

If a perpendicular be drawn from a vertex of a triangle to the opposite side, the rectangle contained by the other sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the rectangles contained by the two pairs of opposite sides.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

If two triangles (or parallelograms) have one angle of the one equal to one angle of the other, their areas are proportional to the areas of rectangles contained by the sides about the equal angles.

Concurrency and Collinearity.

If three concurrent straight lines are drawn from the angular points of a triangle to meet the opposite sides, the product of three alternate segments taken in order is equal to the product of the other three segments.

If a transversal is drawn to cut the sides or the sides produced of a triangle, the product of three alternate segments taken in order is equal to the product of the other three segments.

The three medians of a triangle meet in a point, and their common point is a point of trisection of each median.

The three lines drawn through the angular points of a triangle perpendicular to the opposite sides are concurrent.

The three lines which bisect the angles of a triangle are concurrent; and so also are the bisector of one of the interior angles of a triangle and the bisectors of the other two exterior angles.

The three lines drawn through the middle points of the sides of a triangle perpendicular to those sides are concurrent.

In any triangle the three middle points of the sides, the three feet of the perpendiculars drawn from the angular points on the sides and the three middle points of the lines joining the orthocentre to the angular points all lie on a circle whose diameter is equal to the radius of the circumscribed circle and whose centre is the middle point of the line joining the orthocentre and circumcentre.

If from any point on the circumference of a circle, perpendiculars be drawn to the sides of an inscribed triangle, the three feet of the perpendiculars lie on a straight line.

Harmonic Section.

Division of a given straight line internally and externally so that its segments may be a given ratio.

The locus of a point whose distances from two fixed points have a constant ratio is a circle.

Centre of Similitude.

If any two unequal similar figures are placed so that their homologous sides are parallel, the lines joining corresponding points in the two figures meet in a point, whose distances from any two corresponding points are in the ratio of any pair of homologous sides.

Every straight line which passes through the extremities of two parallel radii of two fixed circles passes through one or other of the fixed points.

Pole and Polar.

If a straight line be drawn through a given point to cut a given circle, the intersection of the tangents at the two points of section always lies on a fixed straight line.

If one point lie on the polar of another point, the second point lies on the polar of the first point.

Radical Axis.

Determination of the locus of points from which tangents drawn to two given circles are equal.

The radical axes of three circles taken in pairs are concurrent.

Construction of the radical axis of two given circles.

Expressions for radii of circum-circle, in-circle and ex-circle of a triangle.

Trigonometry.

Trigonometrical functions of positive angles less than four right angles.

The formulæ relating to triangles with radii of circles connected
with triangles, formulæ for $\tan \frac{A}{2}$ etc.

Four figure logarithms.

Solution of triangles with simple two dimensional problems in heights and distances.

R. 10. IV.—ELEMENTARY PHYSICAL SCIENCE—One Paper.

[Colleges are expected to devote four hours a week to the teaching of Physics in the First Year class.]

Each student shall attend a lecture demonstration course covering the following branches of the subject and in accordance with details which shall be specified by the Academic Council on the recommendation of the Board of Studies from time to time, shall complete a course of laboratory work of not less than 18 experiments as detailed by the Board of Studies, and must record his observations directly in his laboratory journals and write therein a report of each exercise performed. The journal shall be taken into account when awarding a pass. They shall be regularly inspected by the instructors and certified at the end of the year by the head of the department.

Course prescribed :

General Physics: Elementary Mechanics, Hydrostatics, Properties of Matter.

Heat.

Sound.

Light: Elementary ideas of Geometrical Optics and Wave Theory.

Magnetism and Electricity, with simple practical applications.

(Details of the courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.)

Details :—

General Physics.—Units of length, area, volume, mass and time. Density and specific gravity. Pressure in liquids, Pascal's law with applications. The principle of Archimedes, densities of solids and liquids. Pressure of air. Barometers. Compressibility of the air, Boyle's law, Earth's atmosphere. Syphon. Exhaust pump. Compression pump. The balloon. The study of the formation of dew, fog, clouds, rain. Definition and measurement of force. Composition and resolution of forces. Newton's law of gravitation, centre of gravity, equilibrium. Laws of falling bodies. Pendulum. Newton's laws of motion. Definition and measurement of work. Pulley. Force ratio. Lever. Wheel and axle. Inclined plane, screw. Power and energy, horse power, Kilowatt. Potential and kinetic energy.

Heat.—Temperature. Mercury thermometer. Absolute temperature. Low temperatures. Laws of Charles and Gay-Lussac. Expansion of solids and liquids. Applications. Unit of heat, calorie. Mechanical equivalent of heat. Conservation of energy. Perpetual motion. Specific heat. Boiling point. Distillation, Artificial cooling. The steam engine. The gas engine. The steam turbine. Conduction of heat. Convection. Radiation. Ventilation.

Magnetism.—Magnets, magnetic forces, induction. Field of force.

Electricity.—Conductors, insulators, induction. An electric current is a moving charge. Galvanic cell. Magnetic field about a current. Measurement of a current. Electromotive force and its measurement. Fall of potential. Resistance. Ohm's law. Magnetic properties of coils. Electro-magnet. Electric bell. Telegraph. Heat developed by an electric current. Electrical energy. Incandescent lamp. Induced current, induced electromotive force. Principle of the electric motor, dynamo. Strength of the induced E. M. F. currents induced in rotating coils. Simple alternating-current dynamo, commutator. Electric motor, street car. Principle of the transformer. Telephone.

Sound.—Mechanism and transmission of sound. Distinction between musical sound and noise. Pitch. Loudness. Echo. Resonance, vibrating air columns, sounding boards. Beats.

Light.—Speed of light. Reflection, diffusion. Refraction. Corpuscular and wave theories of light. The ether. Intensity of light, candle-power, Bunsen's photometer. Images, lenses, mirrors. Photographic camera. The eye. Wave length of light and colour. Compound colours. Complementary colours. Rainbow.

Practical Work.

Each student shall perform at least 18 experiments, of which *not less than 5* shall be taken from each of the three sections specified below :—

SECTION A.

1. To determine the density of a solid.
2. To find the relation between the time and length of a simple pendulum,

or

 the relation between the period of a bifilar suspension and (*a*) its length, (*b*) the distance between its suspensions.
3. To determine the relation between the density of a solution and its concentration by (*a*) the specific gravity bottle, or (*b*) the *U* tube.
4. To calibrate a simple hydrometer and use it, *e.g.*, as a lactometer to determine the specific gravity of milk.
5. Inclined plane $\frac{W}{P}$.
6. To verify the law of parallelogram of forces.
7. To draw a graph showing the relation between the distance covered and the time taken by a ball rolling down an inclined plane.
8. To draw a graph showing the amount of bending of a beam supported at the two ends and different weights suspended from the middle point.
9. To draw a graph showing (1) the amount of stretching of a spring for various loads, and (2) the relation between the period of oscillation and the load.

10. To find the relation between (*a*) the pressure and volume of a gas at constant temperature, and (*b*) that between the pressure and inverse volume.

SECTION B.

11. A pin is placed in a vertical position inside a beaker of water. To trace the path of rays from the pin to the eye for various positions of the pin. To find the refractive index of water.
12. To find the refractive index of glass by tracing the path of a ray of light through prism.
13. To find the focal length of a convex lens and a concave mirror by the method of images, when the image is enlarged and when it is reduced. To find the magnification.
14. To determine the candle-power of a lamp by a photometer.
15. To obtain the relation between the frequencies of several standard tuning forks and (*a*) the lengths of resonance tubes, or (*b*) the lengths of a wire stretched under constant tension.
16. To find the amount of heat supplied per gm. per degree to a given quantity of water by different solids of about the same weight.
17. To determine the cooling effect of 1 gm. of ice when melted in a beaker of water.
18. To compare the rates of cooling of a vessel full of water when it is (1) whitened, (2) blackened. Draw the cooling curves in both cases.
19. To find the boiling point of water and the rise of B. P. obtained by dissolving given quantities of salt.
20. To find the dew-point with an ordinary vessel polished outside and ice.

SECTION C.

21. To obtain lines of force of a single magnet and of two magnets by iron filings on photopaper or by a search needle.
22. To find the distribution of magnetic force along a long bar-magnet.
23. To find the relationship between the distance of vibration magnetometer from a magnet and its period of oscillation.
24. Qualitative experiments on electric currents, for example, (*a*) magnetic effect; (*b*) electrolysis; (*c*) heating effect by (1) the fusing of a wire, (2) heating of water, (3) elongation of a wire, etc.; (*d*) Arrange two switches to ring the same bell; (*e*) Arrange two lamps in series and in parallel, and so on.

25. To find by the method of substitution the length of a given wire which will give a resistance of 10 ohms. Find the total resistance of two wires in parallel.
26. To measure the E. M. F.'s of several cells arranged in series and in parallel.
27. Make a simple cell from well-cleaned metals and acid and find the deflection made by passing its current through a galvanometer. Note how the cell loses its E. M. F. after a time and the polarization effect.
28. To find points, in two branches of a divided circuit, which are at equal potentials.
29. Make a sketch of a given instrument, such as a dynamo, a motor, a telephone, an electric bell or any other electrical contrivance, and name its essential parts and make a sectional drawing of the same.

CHAPTER III.—INTERMEDIATE EXAMINATION IN ARTS.

Admission.

O. 198. No candidate will be admitted to this examination unless, after obtaining a certificate from the Principal of an Arts College showing that he has satisfactorily carried out the work appointed by the University for the first two terms in Arts, he shall have kept two terms at a College or Institution recognized in Arts, and unless he produces satisfactory testimonials in the prescribed form.

O. 199. Candidates must forward their applications to the Registrar on or before the 20th February accompanied by certificates of attendance during the first term. Certificates of attendance during the second term should be forwarded by Principals of Colleges on or before the 10th March.

R. 11. Candidates will be examined in the following subjects :—

- I. English.
- II. Second Language.
- III. Indian History and Administration.
- IV. Mathematics or Logic.

Syllabus.

R. 12. I.—ENGLISH.—Three Papers.

There shall be three papers of two hours each, two on prescribed texts carrying 80 marks each, and one for composition carrying 90 marks, which shall comprise an essay carrying 45 marks and exercises in composition based upon books prescribed for general reading which shall test the candidate's power of writing correct and idiomatic English. The first two papers will contain questions of a grammatical kind as well as questions on the subject matter of the books. The poetry paper will contain at least one question of a more general kind on the poetic art illustrated in one or other of the texts; and the prose paper will contain at least one question involving elementary principles of composition. Some knowledge of the life and literary productions of each author is expected.

The Academic Council, on the recommendation of the Board of Studies, will prescribe texts at least one year before the examination.

Each student shall write at least eight exercises in English Composition in class to the satisfaction of his teacher during the year.

R. 13. II.—SECOND LANGUAGE.—One paper of 100 marks.

One of the following :—

Sanskrit.	Hebrew.	Portuguese.	Pali.*	Ardha-
Greek.	Arabic.	Avesta &	Persian.	Magadhi.†
Latin.	French.	Pahlavi.	German.	

Candidates will be examined in books prescribed by the Academic Council, on the recommendation of the Board of Studies, at least one year before the examination.

The paper in Second Language will contain unseen passages for translation both out of that language into English and *vice versa* and such passages shall together carry at least 30 per cent. of the total marks. It will also contain questions on Grammar, as well as on the matter of the books prescribed (including passages for translation and explanation).

R. 14. III.—INDIAN HISTORY AND ADMINISTRATION.—One paper of 100 marks.

A period of Indian History (to be studied only so far as it bears on the growth of the Indian Administration).

Indian Administration—

The Secretary of State for India and his Council.

The Government of India.

The Provincial Governments.

District Administration.

Village Organization.

Legislative Councils.

Municipal and Local Self-Government.

Finance.

Land Revenue.

Law and Justice.

Police and Jails.

Education.

Medical Relief and Sanitation.

Public Works.

Famine and Famine Relief.

* Subject to the condition that a candidate taking this language has passed in Sanskrit or Pali at any preceding examination conducted or recognized by this University.

† Subject to the condition that a candidate taking this language has passed in Sanskrit at any preceding examination conducted or recognized by this University.

R. 15. IV.—MATHEMATICS or LOGIC—Two papers (of three hours) of 100 marks each.

(A) MATHEMATICS.

Paper I.

(a) *Trigonometry*—

Trigonometrical functions of any angle, graphs of $\sin x$, etc. Addition formulæ, etc. Properties of triangles. Use of logarithm tables. Solution of general equations. Circular measure and $\sin\theta < \theta$, etc. Simple problems in 3 dimensions in heights and distances.

Summation of $\sin \alpha + \sin (\alpha + \beta) + \dots\dots\dots$
 $\cos \alpha + \cos (\alpha + \beta) + \dots\dots\dots$

Inverse functions.

(b) *Analytical Geometry (Rectangular axes only)*—

Meaning of a graph, equations of a straight line, two straight lines, circle. Equations of the parabola and ellipse referred to the principal axes. Simple tangent and normal properties of these curves. Geometrical illustrations should be given but are not to be required in the examination. Parallel chords, two tangent properties, etc., to be excluded.

Paper II.

(c) *Solid Geometry*—

Elementary properties of lines and planes. Surfaces and volumes of parallelopipeds, pyramids and cones.

(d) *Calculus*—

Differentiation of simple functions; second differential coefficient; statements of binomial exponential and logarithmic series and those for $\sin\theta$, $\cos\theta$, $\tan\theta$; maxima and minima by general and graphical considerations; applications to the tangent and normal properties of conic sections and other simple curves; integration as the inverse of differentiation; direct integration of simple functions; integration by parts; definite integration and application to simple cases of areas; uniform and uniformly accelerated motion.

Details of the courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

(B) LOGIC.

Two papers (of three hours) of 100 marks each.

1. The nature and scope of Logic and its relation to the other sciences.

2. Names and Terms—Classification of terms, denotation and connotation of terms.

3. The Predicables.
4. Propositions—their classification and import.*
5. Nature of Inference and the laws of Thought.
6. Immediate Inferences.
7. The Syllogism. Nature and rules of syllogistic reasoning. Moods and figures.
8. Direct and Indirect reduction of arguments. Enthymeme. Sorites.
9. Hypothetical and Disjunctive arguments. The Dilemma.
10. Probable Reasoning.
11. Definition.
12. Classification and Division.
13. The nature and presuppositions of Induction.
14. Empirical Laws.
15. Inductive Methods.
16. Observation and experiment.
17. Explanation.
18. Hypothesis.
19. Analogy.
20. Fallacies—Deductive and Inductive.

Standard for Passing the Examination.

- R. 16. To pass the examination the candidate must obtain 30 per cent. of the full marks in the paper on English Composition, 30 per cent. in all the three papers in English (taken together), and 30 per cent. in each of the other subjects. Should a candidate, however, not obtain 30 per cent. of the full marks *in one head of passing only*, he shall be declared to have passed the examination, if on a review of the candidate's marks, a majority of not less than two-thirds of the Examiners present decide that the candidate should pass: Provided always that no candidate shall so pass unless he obtains at least 40 per cent. of the total marks in all subjects. Those of the successful candidates who obtain 60 per cent. of the total marks obtainable will be placed in the First Class, and those obtaining 45 per cent. in the Second Class.
- R. 17. A candidate who has obtained 40 per cent. of the total marks in any subject may, at his option, be excused from appearing in that subject at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination: Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper or subject required by Regulation 16. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

*The existential import of propositions or diagrammatic representation of propositions is not to be studied.

CHAPTER IV.—EXAMINATION FOR THE DEGREE
OF B.A.

Admission.

- O. 200.** No candidate will be admitted to this examination unless, after passing the Intermediate Examination in Arts, he shall have completed the minimum attendance at courses of instruction in the subjects offered by him during four terms in one or more colleges each of which is recognized for the course offered and unless he produces satisfactory testimonials in the prescribed form.

N. B.—Students who have passed the B.Sc. Examination of this University will be allowed to take the B. A. (Pass) degree by passing subsequently the Intermediate Arts and B. A. Examinations in one year or one after another in this order. They will not be required to keep terms at a College and may at their option be excused an examination in the following subjects :—

Intermediate Arts—Mathematics (in the case of those who have passed the I.Sc. in Group A or B. Sc. in Mathematics and Physics).

B. A.—Optional subject [in the case of those who have passed the B. Sc. Examination in any of the groups (a) Mathematics (Principal) and Physics, (b) Physics and Chemistry, (c) Botany and Zoology.]

Candidates claiming this exemption at any examination will not be classed or be eligible for prizes at that examination.

- O. 201.** A student who has passed in all subjects but one at the Intermediate Arts Examination in conformity with Regulation 17 (page 137) will be allowed to keep terms and appear for the B.A. Examination after keeping four terms, but will not be declared to have passed this examination under any circumstances, unless he has passed in the remaining subject of the Intermediate Examination held either in a previous or in the same examination season.

- O. 202.** Candidates wishing to appear at the April examination must forward their applications to the Registrar on or before the 20th February accompanied by certificates of attendance during the first three terms. Certificates of attendance during the fourth term should be forwarded by Principals of Colleges on or before the 10th March. Candidates wishing to appear at the October (Pass) Examination must forward their applications to the Registrar on or before the 1st September. Certificates of attendance during the fourth term should, if necessary, be forwarded by Principals of Colleges on or before the 30th September.

- R. 18.** Candidates will be examined in the following subjects :—

I.—English Language and Literature, with Composition.

II.—One of the following six groups :—

- (a) Languages.
- (b) Mathematics.
- (c) History and Economics.
- (d) Mental and Moral Philosophy.
- (e) Physics and Chemistry.
- (f) Botany and Zoology.

R. 19. There shall be an Honours Examination in English, Latin, Greek, Sanskrit, Pali, Ardha-Magadhi, Avesta-Pahlavi, Persian, Arabic, Hebrew, German, French, Portuguese, Mathematics, History and Economics, Philosophy, Physics and Chemistry and Botany and Zoology.

R. 20. For the Honours Examination, there shall be eight papers in English (three in Compulsory English and five in Optional English) and in Mathematics, seven papers in History and Economics and Philosophy, and seven in each of the languages—Latin, Greek, Sanskrit, Pali, Ardha-Magadhi, Avesta-Pahlavi, Persian, Arabic, Hebrew, German, French and Portuguese. These seven papers shall consist of four Pass papers and three additional Honours papers. Each additional Honours paper shall carry 150 marks, except in Mathematics, in which the Essay paper shall carry 80 marks and the other seven papers 110 each. For the Honours Examination, languages are grouped thus :—

(A) Latin, Greek, English, German, French, Portuguese.

(B) Sanskrit, Pali, Ardha-Magadhi, Avesta-Pahlavi, Marathi, Gujarati, Sindhi, Kannada.

(C) Hebrew, Arabic, Persian, Avesta-Pahlavi, Sindhi, Urdu.

The Honours Examination in groups (e) and (f) will be identical with the B.Sc. Subsidiary Examination in each subject of the group.

R. 21. A candidate for Honours, subject to Regulation 20 so far as it applies to English Honours, may take seven papers, (four Pass and three Honours), in any one of these languages or may take five papers in any one language (two Pass and three Honours), and two Pass in any other language belonging to the same group.

R. 22. Candidates who offer the vernacular languages will have the option of answering all the questions in the papers on these languages except the one for translation into English in the vernaculars which they offer.

R. 23. For the Pass Examination, there shall be two papers in Optional English and two in each of the other languages, and, four in each of the subjects, Mathematics, History and Economics and Philosophy, each paper in Persian, French, German, Marathi, Gujarati, Kannada and Urdu carrying 85 marks and each of the other papers 100 marks. In groups (e) and (f) there shall be two papers and two practical examinations in each of the two subjects of either group. In group (e) or (f) for the Pass Examination there will be 75 marks for each paper and 25 for each Practical.

Syllabus.

R. 24. I.—COMPULSORY ENGLISH.—Three papers.

In Compulsory English there will be three courses, *viz.* :—

Course I.—Two plays of Shakespeare for detailed literary study with a general knowledge of the Elizabethan theatre and manners, and the outlines of Shakespeare's life. The Academic Council, on the recommendation of the Board of Studies, will change one of the plays each year.

Course II.—Selections from one poet and one prose-writer of the 19th century, to be read without minuteness. The Academic Council, on the recommendation of the Board of Studies, will change one of the authors every year.

Course III.—Four modern texts* for rapid reading in illustration of present day English life and thought; of these at least one shall consist of verse, another of essays to be made the basis of practice in composition. A minimum of six compositions shall be written each year by each student. The Academic Council, on the recommendation of the Board of Studies, will change half the texts each year.

Courses I and II will each be examined by means of a paper of three hours carrying 80 marks; Course III by means of a paper of three hours carrying 90 marks, containing themes for an essay or other exercises in composition suggested by the texts prescribed.

II.—OPTIONAL GROUPS.

R. 25.

(a) LANGUAGES.

Two languages to be selected from the following: Provided that both these languages are not taken out of the last five:—English Sanskrit, Greek, Latin, Hebrew, Arabic, French, Avesta and Pahlavi, Pali, Persian, German, Portuguese, Ardha-Magadhi, Marathi, Gujarati, Kannada, Urdu, Sindhi.

ENGLISH—(Pass Examination).

Course IV.—The general principles of literary criticism with special study of two literary forms, supplemented by a general study of not more than three texts illustrating each literary form. The Academic Council, on the recommendation of the Board of Studies, will prescribe one literary form and its illustrative texts each year.

The course will be examined by two papers, each of three hours and each carrying one hundred marks. A literary form and its illustrative texts will be examined in each paper.

(Additional English for Honours.)

For Honours there shall be three additional courses, *viz.* :—

Course V.—Special study of a period of English literary history with selections from four representative writers, two being poets and two prosaists. The following are the periods to be successively studied :—

1550—1650, 1600—1700, 1650—1750, 1700—1800,
1750—1850, 1800—1890, 1850—1920.

Course VI.—Study of the social history and institutions of the period prescribed for Course V.

Course VII.—Chaucer studied from the literary and social point of view. The prologue shall be studied in general and one of the tales in detail each year.

Courses V, VI and VII shall each be examined by means of a paper of three hours carrying one hundred and fifty marks.

* Modern texts are defined to mean works published in or after 1822.

The Academic Council, on the recommendation of the Board of Studies, will prescribe texts, literary forms and period for all the seven courses in literature at least two years before the examination.

Languages other than English (Pass Examination).

N. B.—Candidates for the Pass Degree must offer four papers, two in each of the two languages selected from (A) below or one language selected from (A) and the other from (B).

(A) Latin, Greek, Sanskrit, Pali, Ardha-Magadhi, Avesta-Pahlavi, Persian, Arabic, Hebrew, German, French, Portuguese.

(B) Marathi, Gujarati, Sindhi, Urdu, Kannada.

In all languages other than English, books both of prose and poetry will be prescribed and the papers will contain unseen passages for translation both out of the language into English and *vice versa* and, in the case of Persian, French, Marathi, Gujarati, Kannada, Urdu, Sindhi and Portuguese, exercises in composition, and this work (including unseen translation and composition) shall together carry at least 30 per cent. of the total marks. The papers will also contain questions of a critical and historical nature bearing on the texts, as well as passages for translation and explanation from the text-books. In Persian, French, German, Marathi, Gujarati, Kannada and Urdu, one or more questions will require to be answered in those languages and there will be an oral examination carrying 30 marks.

In Greek, candidates will be supposed to understand the principles of iambic and hexameter verse and the chief peculiarities of Homeric dialect, grammar and syntax; in Latin, a knowledge of the metres used by Horace will be required.

(Three Additional Papers for Honours.)

Two papers will be set in additional text-books to be prescribed by the Academic Council, on the recommendation of the Board of Studies, at least three years before the examination. Candidates will be examined in the text-books prescribed. Some knowledge will be required of literature and of the philosophical or literary or historical environment of the authors of the books prescribed.

In Sanskrit, Pali and Ardha-Magadhi the first two papers will be on the text-books prescribed and the third paper will require a short essay or essays in English or the Honours Language (at the option of the candidate) on the history of its literature or on a subject connected with the course and unseen passages for translation from and into English.

The unseens for translation from and into English will carry 75 marks, and the short essay or essays 75 marks, ample option being given in the choice of the themes for the short essay or essays.

In Persian, Arabic, French, German and Portuguese, in the papers on the text-books, candidates will be required to answer one or more questions in those languages.

The third paper in Latin, Avesta-Pahlavi and Hebrew will contain unprepared passages for translation into English and *vice versa*.

In the third paper in Persian, Arabic, French, German and Portuguese, candidates will be required to write a short essay in the language on the history of its literature, or on a subject connected with the course, paraphrase an unseen passage and translate unseen passages from and into English.

R. 26.

(b) MATHEMATICS.

Details of the syllabus will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

(Pass Examination)—Four Papers.

Paper I.

Algebra and Theory of Equations—

Convergency, Binomial, Exponential, Logarithmic Series, including De Moivre's Theorem, hyperbolic functions, series for $\sin \theta$, $\cos \theta$.

Partial fractions, summation of simple series.

Theory of equations, as in Smith's Algebra.

Analytical Geometry of parabola, ellipse, hyperbola, including polar co-ordinates. Also reduction and tracing of curves given by the general equation of the second degree.

Paper II.

Differential Calculus.—Taylor's Theorem for single variable and expansions. Partial differentiation, notation and application to two variables. Undetermined forms, maxima and minima of functions of one variable including implicit functions. Applications to plain curves with elementary theory of tangents and normals, asymptotes, singular points, curve tracing and the fundamental formula for the radius of curvature.

Integral Calculus.—Definitions and methods of integration, standard forms, reduction formulæ, partial fractions, standard forms of definite integrals (omitting gamma functions), integration and evaluation of areas, lengths, surfaces and volumes of revolution and centroids.

Ordinary Differential Equations.—The standard forms of the first and second orders and linear equations with constant coefficients.

Paper III.

Statics (Elementary).—including virtual work in two dimensions and application to frameworks.

Hydrostatics (Elementary).

Paper IV.

Dynamics (Elementary).

Astronomy (omitting astronomical instruments) treated mathematically so far as knowledge of the elementary properties of the sphere (as e. g., in Davison's Solid Geometry,

Chapter IV) and a knowledge of the fundamental formulæ of Spherical Trigonometry (as *e. g.*, in the first three chapters of Todhunter and Leathem will permit. [*In this paper no questions on the Geometry of the Sphere or Spherical Trigonometry as such are to be asked.*]

[N. B.—In papers III and IV, methods of the calculus are permitted but not required.]

(Honours Examination)—Eight Papers.

Paper I.

Analytical Geometry of Conic Sections including polar coordinates, oblique axes and general equation of the second degree.

Solid Geometry.—Analytical Geometry of a point, line, plane, sphere, cone and central conicoids referred to their principal axes.

Paper II.

Algebra and Theory of Equations.—The Pass Course together with determinants and multiplication of determinants of the third order. The numerical solution of equations and the theory and solution of the cubic and the biquadratic.

Trigonometry.—Trigonometry may be treated by the methods of the Calculus and will include De Moivre's Theorem, expansions of $\sin n\theta / \sin \theta$ and $\cos n\theta$ in powers of $\cos \theta$, expansions and infinite product expressions for $\sin \theta$, $\cos \theta$, with partial fraction expressions obtained by differentiation. Factorization.

Papers III and IV.

Differential and Integral Calculus and Differential Equations.—Differential Calculus will extend over the Pass Course together with Taylor's Theorem for two variables, partial differentiation, formulæ for the radius of curvature and maxima and minima for functions of two variables.

Integral Calculus will extend over the Pass Course with elementary definite integrals (including gamma functions), double integration (excluding transformation), centroids, moments of inertia, Fourier's Series.

Ordinary Differential Equations of the first and second order excluding integration by series.

Paper V.

Spherical Trigonometry.—Properties of triangles relating to sides and angles. Fundamental formulæ for a triangle including Napier's and Delambre's analogies. Solution of triangles.

Astronomy.—The earth, refraction, parallax aberration, precession and nutation, the Sun and the solar system; the Moon; eclipses; determination of latitude, longitude, first point of Aries and obliquity of the ecliptic; time; calendar. [The subject to be treated mathematically with the use of Spherical Trigonometry.]

Paper VI.

Statics (Elementary and Analytical).—Principally of two dimensions, including the principle of Virtual Work for two dimensions with application to frameworks and simple applications of funicular and force polygons.

Hydrostatics (Elementary).—Equilibrium of floating bodies; metacentre for surfaces of revolution; centres of pressure treated by the methods of the Integral Calculus; rotating fluids about a vertical axis under gravity; laws of gases; hydrostatic and pneumatic machines (omitting capillarity and surface tension).

Paper VII.

Dynamics (Elementary and Analytical).—Rectilinear and simple harmonic motion and pendulums; parabolic motion and motion where variations of gravity are taken into account; principles of momentum, work, energy; collision of two elastic bodies; integration of motion under the law of gravitation and motion in eclipse and parabola; composition of harmonic motions and motion about a fixed axis.

Paper VIII.

Essay.—This Paper will contain not less than ten themes of sufficiently wide range and covering the main branches of study, and the candidate shall write an essay on not more than two of these which will be judged on the general grasp of mathematical principles shown therein.

The first seven papers will carry 110 marks each and the eighth paper will carry 80 marks.

R. 27.**(c) HISTORY AND ECONOMICS.****(Pass Examination)**—Four papers.

1. History of England (Political and Constitutional).
2. History of India.
3. Politics.
4. Economics.

[N.B.—The general principles of Economics are, wherever possible, to be studied in reference to Indian conditions and problems.]

SCOPE, METHODS, FUNDAMENTAL CONCEPTS.

Definition, scope and methods. Relations to other Sciences, especially Psychology and Ethics.

Fundamental concepts; utility, value, wealth.

Meaning and stages of economic development. Conditions of economic life. Private property, competition, freedom.

Value. Marginal utility. Marginal cost. Capital value and rental value. Determination of market value and normal value. Law of increasing, constant and diminishing return.

PRODUCTION.

Factors of production. Nature and man. Land and labour. Co-operation and division. Population. Factors determining quantity and quality. Large scale production. Pools. Cartels. Trusts.

Capital. Organization in agriculture, industry, finance.

DISTRIBUTION OF WEALTH.

National dividend and its distribution. Rent. Land tenures. Justification of rent. Interest. Profits. Ordinary and speculative profits. Justification of profits. Wages. Theories of Wages. The Labour problem. Labour legislation. Labour Organization. Profit-sharing. Co-operation. Socialism.

EXCHANGE.

Money and coinage. Value of money. Index numbers. Quantity theory. Level of prices. Systems of currency. Paper money. Credit, forms and function, banks and banking. Theory of International Trade. Foreign Exchanges.

CONSUMPTION.

The consumer's freedom and the distribution of wealth. Socialisation of consumption. The marginal utility theory. Organization of values and standards of living.

PUBLIC FINANCE.

Revenue and expenditure. Principles of taxation. Public debt. Loans and taxation.

Three additional papers for Honours.

The Honours Degree may be taken in either (i) History or (ii) Economics.

(i) *History.*

1. European History.
2. Greek *or* Ancient Persian History *or* Roman History.
3. Essay.

OR

(ii) *Economics.*

1. History of Economic Doctrines and a period of English Economic History.
2. Indian Economics.
3. Essay.

INDIAN ECONOMICS.

1. Indian Economics, a separate subject for study.
2. Survey of India's physical environment and natural resources. Improvements by human efforts.

3. Population : Statistics. Population and Wealth. Distribution, according to vocation, sex, age. Distribution between city and country. Movements of population. Birth rate. Death rate. High mortality. Causes and remedies. Migration of population. Birth control. Eugenics.
4. Social and religious institutions : Their economic significance. The caste system. The Joint Family. Laws of Property, Succession and Inheritance. Religious and Psychological factors. Their bearing on economic life.
5. Economic transition in India during the last hundred years : Ruralization. Decay of indigenous industries. Loss of economic equilibrium. Sudden transition from local to international economy.
6. Agriculture : Statistics of production and exports of agricultural products. Yield per acre. Low productivity. Lack of capital. Problem of manure. Sub-division and fragmentation of holdings. Causes and remedies. Live stock. Agricultural indebtedness. Causes, extent and remedies. Co-operation. Land Mortgage Banks. Agricultural labour. Organization and marketing. Land tenures.
7. Industries : History and survey. Statistics of production. Large scale industries. Organization and enterprise. Indigenous and foreign capital. Marketing. Importance of Cottage industries. Financing and Marketing. Fiscal policy. Protection. State aid to industries.
8. National dividend of India and its distribution.
9. Labour : Statistics. Low efficiency. Causes and remedies. Trade Unionism. Labour Legislation.
10. Transport : Roads. Railways. Railway Finance and Policy. Canals. Mercantile marine.
11. Foreign trade : Statistics of exports and imports. Balance of trade and balance of accounts. Home charges. Foreign trade and national welfare.
12. Indian currency system : History. Gold Standard, and Gold Exchange Standard. Council Bills. Reverse Bills. Gold Standard Reserve. Paper Currency. Foreign Exchanges.
13. Indian Banking : Imperial Bank of India. Exchange Banks. Joint Stock Banks. Mahajans. Post Office Savings Banks. Co-operative Banks. Seasonal stringency and Bank rate. Industrial Banking.
14. Indian Finance : Central, Provincial, Local. Allocation of sources of revenue between the Central and Provincial Governments. Revenue. Expenditure. Public debt. Taxable capacity of the people.

R. 28.

(d) MENTAL AND MORAL PHILOSOPHY.

1930 and Subsequent Years.

(Pass Examination)—*Four Papers.*

Paper I.—Elements of Ethics.

Paper II.—Elements of Psychology.

Paper III.—History of Ancient Philosophy from Socrates to Aristotle (inclusive) and History of Modern Philosophy from Descartes to Kant (inclusive).

Paper IV.—Philosophical Essay. (The paper shall contain at least four questions and not more than two shall be attempted.)

Three additional papers for Honours.

Paper V.—Elements of Metaphysics.

Paper VI.—Contemporary Philosophy.

Questions shall be strictly limited to "Perry's Present Philosophical Tendencies", and to the following Philosophers dealt with in Hoffding's "Modern Philosophers and Lectures on Bergson", pp. 56—70 (Bradley) and 158—302 (Nietzsche, Eucken James and Bergson).

Either

Paper VII.—History of Indian Philosophy.

Questions shall be restricted to the elements of the six systems of Indian Philosophy—Purva and Uttar Mimamsa, Samkhya and Yoga, Nyaya and Vaiseshika. An understanding of the broad and characteristic views and doctrines of these six systems with their inter-relations is expected.

or

One of the following Special Philosophers to be determined by the Academic Council, on the recommendation of the Board of Studies, at least two years before the examination :—

(a) Plato : The Republic.

(b) Spinoza : Ethics.

(c) Bradley : Appearance and Reality (for 1932 and 1933).

(d) Bergson : Creative Evolution.

R. 29.

(e) PHYSICS AND CHEMISTRY.

(i) *Physics*

(Two Papers and two Practical Examinations of not more than three hours each.)

Candidates shall be examined in the following branches of the subject in accordance with details which shall be specified by the Academic Council, on the recommendation of the Board of Studies, from time to time.

Course Prescribed :—

General Physics : Mechanics (Kinematics, Kinetics, Statics), Hydrostatics, Properties of Matter.

Heat : Temperature, Thermometry, Calorimetry, Transference of Heat, First and Second Laws of Thermodynamics.

Sound.

Light : Geometrical and Physical Optics.

Electricity and Magnetism, including elementary Dynamo and Motor Machinery.

Pass candidates will be examined in the syllabus as detailed below, *with the exception of the portions marked with an asterisk* and the **Honours** candidates will be examined in the whole syllabus.

The papers will be constituted thus :—

Paper I.—Mechanics, Hydrostatics, Properties of Matter, Sound and Heat.

Paper II.—Light, Electricity and Magnetism.

DETAILS :—

General Physics.

Units and dimensions. Length and instruments of measurement. Matter, mass and instruments of measurement. Sensitiveness of a balance. Faults in a balance. Volumes and densities of solids, liquids and gases. Work, energy, forms of energy, conservation of energy. Circular motion, conical pendulum. Moment of inertia. Energy of rotation. Simple pendulum. Compound pendulum. Kater's reversible pendulum. Elastic oscillations. Combination of two S. H. M's. Elasticity, Poisson's ratio. Bulk-modulus. Modulus of rigidity and experimental determination of the same. Torsion and torsional balance and pendulum. Joly's spring balance. Impact. Bending of rectangular rods. Experimental determination of Young's modulus. *Searles method for the determination of Young's Modulus and rigidity. Gravity, measurements of gravity. Atwood's machine. Falling plate. Pendulum. Reversible pendulums. Errors: in determination of "g". Kepler's laws and Newton's laws. Motion of the moon. Universal law of gravitation. Variation in 'g' due to the altitude. Shape of the earth. Gravitation constant. Cavendish's methods. Boy's method.

Gas laws. Kinetic theory of gases. Avogadro's hypothesis. Vander Waal's equation. *Molecular free path. Effusion, transpiration, diffusion. Solution of gases in liquids. Henry's law. Passage of gases through solids. Siphon barometer. Fortin's barometer. Corrections to a barometer reading. Pressure gauges. * Relation between pressure and height.

Hydrostatics.—Thrust and pressure in liquids. Conditions of equilibrium of a floating body. Metacentre, centre of pressure. Siphon. Velocity of efflux. Vena contracta. Molecular structure of a liquid. Viscosity of liquids. *Fick's law. Osmosis, dialysis. Osmotic pressure and vapour pressures of solutions. Friction. Ropebrake. Capillarity (small quantities of liquids). Surface tension. Three separating surfaces. Angle of contact. Measurement of angle of contact. Rise of liquid. Evaporation at curved surfaces.

Sound.

Interference of waves. Huyghen's construction for reflections of waves. Stationary waves. Transverse waves on a string. *Deep-water and shallow-water waves. Compression and dilatation waves.

Velocity of sound in homogeneous solids, corrections. Temperament. Musical scales. Interference. Stationary waves in free air. Doppler's principle. Vibrations of strings, rods, plates and columns of gas. Energy of vibration. Damping. * Forced and free vibrations.

Heat.

All work set for Inter. Science in greater detail, together with :— Compensation of timekeepers. The gas thermometer. Specific heat, *radiation correction. Specific heats of a gas. Specific heat of a gas at constant pressure. Specific heat of a gas at constant volume. Variation of specific heat with change of temperature, density and state. *Dulong and Petit's law. Effect of pressure on the melting point. Bunsen's ice calorimeter. Joly's steam calorimeter. Vapour density. Measurement of vapour pressure. Effect of curvature of the surface on the vapour pressure. Sublimation. The triple point. Freezing point of solutions. Heat of solution, freezing mixtures. Boiling point of solutions. Thermal phenomena accompanying chemical change. Curves showing relations between pressure, volume and temperature. Isobars. Isothermals. The critical point. Density of saturated vapour and of the liquid up to the critical point. Vander Waal's equation. Liquefaction of gases. Conductivity. Lee's method. Conductivity of liquids. Conductivity of gases. Equality of emissive and absorptive powers. Measurement of coefficient of absorption and emission. Relation between amount of radiation and temperature. Stefan's law. Specific heat by cooling. Mechanical theory of heat. Work done in expanding a gas. *Ratio and difference of specific heat in term of J. *Work done in a change of state. *Changes in kinetic energy of molecules when heated. Adiabatic expansions. Clement and Desorme's experiment. Carnot's theorem. Second law of thermodynamics.

Light.

Reflection of a spherical wave at a plane surface. Rotation of a plane mirror. Reflection at two plane mirrors. Caustics formed by reflection. Parabolic mirrors. Position of the image formed by two lenses. Eye-pieces. Velocity of light. Fizeau's method. Foucault's method. Aberration. Nature of light. Refractive index, dispersive power. Achromatic prisms. Achromatic lenses. *The rainbow. Interference of light. The diffraction grating. Colours of thin plates. *Newton's ring. *Rectilinear propagation of light. *Diffraction. Nature of light emitted by a luminous body—spectra. Series spectra. Absorption of light. Reversal of lines. Displacement of spectral lines. Anomalous dispersion. Colour produced by absorption. Chemical action of absorption. Polarisation. Double refraction. Interference of polarised light. Wave surfaces in uniaxial crystals. Huyghen's construction. Nicol's prism. Polarisation by reflection. Brewster's law. Rotation of the plane of polarisation. Saccharimeters, chemical activity.

Electricity and Magnetism.

Magnetism.—Gauss's proof of the law of inverse squares. Magnetic potential. Potential at any point due to a short magnet. Surfaces of equal magnetic potential. Relationship between magnetic intensity

and potential. Molecular magnets. Behaviour of soft iron in magnetic fields. Magnetic screening. Magnetic keepers. Distribution of free magnetism along a bar-magnet. Distinction between lines of force, lines of magnetisation, and lines of induction. Paramagnetic and diamagnetic substances. Moments of magnets. *Determination of H at observatories.

Statical Electricity.—The electric field. Capacity of a sphere. Field of force of a simple air condenser. Capacity of a simple air condenser. The capacity of a spherical condenser. Successive condensers. Comparison of capacities by electrostatic methods. Faraday's experiments on dielectrics. Residual charge. Relation between intensity of field and specific inductive capacity. The force of attraction between the plates of a condenser, separated by a dielectric. Parallel plate condenser with compound dielectric. Leyden jars in parallel and in series. The energy of a charged condenser. Loss of energy when a charged and an uncharged condenser are connected. Condensers of large capacity. *Attracted disc electrometer. The Dolezalek electrometer. *The electrostatic voltmeter.

Dynamical Electricity.—Voltaic cell. Field due to a linear current. Field due to a current in a circular conductor. Equivalent magnetic shell. Ampere's theorem. Magnetic moment of a circular current. Magnetic field due to a solenoid. Mechanical force acting on a linear conductor conveying a current when placed in a magnetic field. Measurement of an intense magnetic field. Force exerted by a magnetic field on a rectangle conveying a current. Mutual action of parallel and oblique currents. Suspended coil galvanometers. Ballistic galvanometer (suspended magnet type). Resistance. Kirchhoff's laws. Temperature coefficient of resistance. Platinum resistance thermometers. Grouping of cells. The potentiometer. *Thermo-electricity. Magnetisation of iron. Permeability and susceptibility. Measurement of permeability by magnetometer method and by ballistic method. Curves of magnetisation. *Hysteresis. Magnetic induction. General principles. Foucault currents. Self induction. Mutual induction. The Ruhmkorff induction coil. Instantaneous value of the induced E. M. F. in an earth inductor. Alternating currents. Induced currents produced by rotating a coil in a magnetic field. Machines for the conversion of mechanical energy into electricity. Dynamo electric machines. Series, shunt, and compound machines. Back E. M. F. in motors. Chemical effects of the electric current. Discharge of electricity through gases. *Units and dimensions.

Practical Examinations.

Pass candidates will be examined in the following course of Practical Physics together with experiments marked *in the *practical course* for Honours candidates (page 152).

Practical Work.

Every candidate shall complete a course of laboratory work of not less than 25 experiments as detailed by the Academic Council on the recommendation of the Board of Studies. Each candidate shall produce a certificate from the Head of the Department that he has completed in a satisfactory manner at least the prescribed number of

experiments. Every candidate must record his observations directly in his laboratory journal and write therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff and certified at the end of the year. Candidates must be examined in any of the experiments marked (*) or on any other experiments by him in the laboratory as shown in the journal. The journal shall be produced at the examination.

Practical Course.

Experiments marked* are to be considered 'Compulsory'.

- *1. Use of the balance. Method of oscillations.
- *2. Use of callipers.
- *3. Use of micrometer screw.
- *4. Use of spherometer.
- *5. Specific gravity. Specific gravity bottle.
- 6. Inclined plane.
- 7. Coefficient of friction.
- 8. Force ratio of a pair of pulley blocks.
- *9. γ by stretching.
- 10. Atwood's machine.
- *11. 'g' by pendulum.
- 12. Verification of Boyle's law.
- 13. Surface tension.
- *14. μ'' by pin method.
- *15. Radius of curvature of a concave mirror.
- *16. Radius of curvature of a convex mirror.
- *17. Focal length of a convex lens.
- 18. Focal length of a concave lens.
- 19. Photometers. Rumford, Bunsen, Joly.
- *20. Testing a thermometer.
- 21. Boiling point of a liquid.
- 22. Coefficient of linear expansion of a solid.
- *23. Specific heat of a solid.
- 24. Latent heat of fusion.
- *25. Latent heat of vaporisation.
- *26. Frequency of a tuning fork (string method).
- *27. Velocity of sound (resonance).
- 28. Hygrometers.
- 29. Magnetic moment of a bar magnet.
- 30. Magnetic axis and meridian.
- *31. Tangent galvanometer.
- 32. Resistance by substitution.
- *33. Resistance by meter bridge.

Practical Course for Honours candidates.

[B. A. Pass Physics students need do only those marked * in addition to I. Sc. work.]

Experiments marked * are to be considered 'compulsory.'

- *1. Sensitiveness of a balance.
2. Use of a travelling microscope.
3. γ by bending.
- *4. Modulus of rigidity, statical method, dynamical.
5. Moment of inertia of a flywheel.
6. Moment of inertia of a disc.
- *7. Moment of inertia of a bar by bifilar suspension.
- *8. Kater's Pendulum.
9. Frequency of a tuning fork.
- *10. Velocity of sound (Kundt's tube).
- *11. Sonometer.
- *12. Angle of rotation of a plane mirror.
13. Use of a sextant.
14. Determination of critical angle.
15. μ by rising of image.
16. Focal length of a lens by use of a telescope.
17. μ of a liquid by lens and mirror.
- *18. Focal length of a concave lens by using a convex lens.
19. Radii of curvature of a lens.
- *20. Magnifying power of a microscope.
21. Magnifying power of a telescope.
- *22. μ by spectrometer.
23. Calibration of a spectroscope.
24. Calibration of the bore of a thermometer.
25. Cubical expansion of water, specific gravity bottle.
26. Constant volume air thermometer.
- *27. Specific heat of a solid with corrections for radiation.
28. Melting point by cooling curve.
29. Specific heat of a liquid by method of cooling.
30. Mechanical equivalent of heat (Electrical method).
- *31. Comparison of magnetic moments.
- *32. Determination of H .
33. Determination of the Dip.
34. Resistance of a galvanometer—
 - (1) by shunting,
 - (2) by Kelvin's method,
 - (3) with P. O. B.
35. Internal resistance of a cell.
36. Resistance of an electrolyte. Kohlrausch's method,

37. Change of resistance with temperature.
- *38. Resistance of a wire by P. O. B.
39. Comparison of two low resistances.
40. Measurement of a high resistance.
- *41. Constant of galvanometer. Water voltameter. Copper voltameter.
42. Comparison of capacities. Bridge method.
- *43. Comparison of E. M. F. using Potentiometer.
44. Biprism, wave length.
45. Newton's rings.
46. Diffraction grating.
47. Saccharimeter.

(ii) *Chemistry.*

Pass Examination.

(Two Papers and two Practical Examinations.)

The subject as for the Honours Examination (pp. 153-155) treated in a more simple manner.

Practical Examination.

Each candidate must produce a certificate from the Head of the Chemistry Department of his College that he has completed, in a satisfactory manner, a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal, and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

COURSE OF PRACTICAL WORKS AT PRESENT PRESCRIBED.

1. Exercises in qualitative separation, mixtures not to contain more than one inorganic acid and two inorganic bases.
2. Preparation and purification of inorganic salts.
3. Preparation and purification of the simpler organic compounds, involving exercises in bromination, esterification, nitration and simple condensations.
4. Determination of melting point, boiling point, solubility.
5. The gravimetric and volumetric determination of the following metals and acids as occurring in simple substances not containing more than one metal and one acid:—Silver, Lead, Copper, Iron, Aluminium, Calcium; Chlorides, Sulphates, Phosphates, Carbonates.

Honours Examination.

(Two papers and two days' Practical Examination.)

Details of the syllabus will be specified from time to time by the Academic Council on the recommendation of the Board of Studies,

Papers I and II.

Questions on Inorganic, Organic, and General and Physical Chemistry may be asked in each paper.

I.—Inorganic Chemistry.

The subject as for the Intermediate Examination in Science (pages 197–198) treated more fully and in greater detail, including the consideration of the following elements and the compounds, not then discussed :—

Gold, Strontium, Cadmium, Cobalt, Nickel, Platinum, Argon, Helium.

Manufacturing methods with special reference to the Alkali and Sulphuric Acid industries.

Special attention will be given to the relationships of the elements and their compounds to one another.

II.—Organic Chemistry.

Purification of Organic substances. The detection of Carbon, Hydrogen, the Halogens, Nitrogen, and Sulphur. Ultimate analysis. Empirical and molecular formulæ.

The principles of Organic Chemistry, illustrated by the following types of reaction and by the following substances and classes of substances :—

Types of reaction : Halogenation, Nitration, Sulphonation, Oxidation, Reduction, Condensation. Fermentation. Esterification, Hydrolysis, Diazotisation. The Grignar reaction, Aceto-acetic ester synthesis, Malonic ester synthesis.

Substances and classes of substances : Open chain saturated and unsaturated Hydrocarbons and their Halogen derivatives. Alcohols including Allyl alcohol, Glycol, and Glycerin. Ethers. Thio-alcohols and Thio-ethers. Aldehydes. Ketones. Fatty acids and their halogen substitution products. Soaps. Acid chlorides, bromides. Ketonic acids. Dibasic acids. Hydroxy-acids.

Amines, Alkyl derivatives of phosphorus and arsenic, Acid amides, Nitroparaffins, Sulphites and Sulphonic acids. Cyanogen compounds.

Carbohydrates including glucose, fructose, galactose, cane sugar, lactose, maltose, starch and cellulose.

Aromatic hydrocarbons; their halogen derivatives, sulphonic acids, nitrosubstitution products, and amino derivatives, Diazo compounds and azo colours. Phenylhydrazine. Phenols. The simpler aromatic alcohols and their derivatives. Aromatic ketones and aldehydes. Aromatic acids including benzoic, toluic, phthalic, salicylic, and cinnamic acids. Quinones. Phenolphthalein. Triphenyl methane colours.

Naphthalene and its principal derivatives : anthracene, anthraquinone, alizarine.

Heterocyclic ring compounds, including furfuran, pyrrol, thiophene, pyridine, quinoline, iso-quinoline and their chief derivatives.

III.—General and Physical Chemistry.

Laws of Chemical combination. The elements. Equivalents and atomic weights. Numerical relations of atomic weights. The atomic and molecular theory. The determination of molecular and atomic weights. Periodic system of the elements.

Gases and the laws relating to them. The Kinetic theory of gases.

Fusion and solidification. Vaporization and condensation. Liquefaction of gases and critical phenomena. The phase rule.

Liquids and their properties. Solutions and the current theories with regard to them. The properties of solids. Colloids and their properties.

Relation of physical properties to chemical constitution.

Law of mass action. Balanced actions. Catalysis.

Thermochemistry.

Electrolysis. Conductivity of solutions.

Practical Examination.

Each candidate must produce a certificate from the Head of the Chemistry Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council, on the recommendation of the Board of Studies, and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

COURSE OF PRACTICAL WORK AT PRESENT PRESCRIBED.

1. Exercises in qualitative separation, mixtures not to contain more than two inorganic acids and two inorganic bases.
2. Preparation and purification of inorganic salts.
3. Preparation and purification of the simpler organic compounds.
4. Determination of melting point; boiling point; density including that of vapours; solubility; molecular weight. Calibration of measuring apparatus.
5. Gravimetric and volumetric analysis, and their application to the estimation of the more commonly occurring bases and inorganic acids in simple salts.

[N. B.—The use of reference books may be permitted during the practical examination.]

R. 30.

(f) BOTANY AND ZOOLOGY.

(i) *Botany*.

Pass Examination.

(Two Papers and two Practical Examinations.)

(Each of 75 marks.)

I.—*External Morphology*.—The detailed morphology of the root, shoot and reproductive organs (including fruit and seed) in both Pteridophytes and Spermatophytes.

II.—*Internal Morphology*.—The structure of the cell; Karyokinetic and other methods of division; tissues, primary and secondary meristems, parenchyma, prosenchyma, vascular or conducting tissues, tracheal and sieve tube, laticiferous and glandular tissue; tissue system, epidermal ground tissue, and vascular or conducting; the internal structure of plant organs.

III.—*Physiology*.—Nutrition, the food of plants and its absorption, osmosis, root pressure, photosynthesis, translocation and storage of food, transpiration and exudation, the nutrition of parasites, saprophytes and insectivorous plants, growth, conditions influencing growth, growing regions in plant. Metabolism, the cycle of plant energy, respiration, enzymes, and the digestion of reserve food. Response to stimuli as evinced in the structure and movement of plants. Sexual and asexual reproduction.

IV.—*Ecology*.—The reaction of plants to their environment as illustrated by aquatic plants, hygrophytes, mesophytes and xerophytes; floral mechanisms and seed dispersal.

V.—*Evolution*.—Theories of Evolution; Genetics including the work of Mendel.

VI.—*Plants*.

1. The plant body, its parts, their forms and arrangement.
2. The internal structure of plants.
3. The functions of plant parts and tissues.
4. The principal divisions of the plant kingdom.

The above points are to be studied in an elementary manner from common plants and in addition the following types are to receive special attention—

Bacillus, Yeast, Mucor, Spirogyra, Nephrolepis, Cycas, Maize, Bean, Nymphaea.

Practical Examination.—

Every candidate shall complete a laboratory course in accordance with the Regulations issued from time to time by the Academic Council, on the recommendation of the Board of Studies. Each candidate shall produce a certificate from the Principal of his College that he has completed in a satisfactory manner the prescribed course. Every candidate must record his observations directly in his laboratory journal. Every journal is to be signed periodically by a member of the laboratory

staff and certified by him at the end of the year. Candidates are to produce their journals at the practical examination and such journals may be taken into account by the Examiners in assigning marks.

Practical work.—

(1) The recognition, dissection, examination, and description, of the above-mentioned plants and parts of them.

(2) The use of the microscope in examining the structure of plants. The preparation of the above-mentioned plants and parts of them for the microscope.

Honours Examination.

(Two papers and two Practical Examinations.)

(Each of 75 marks.)

I.—*External Morphology.*—The detailed morphology of the root, shoot and reproductive organs (including fruit and seed) in both Pteridophytes and Spermatophytes.

II.—*Internal Morphology.*—The structure of the cell; Karyokinetic and other methods of division; tissues, primary and secondary meristems, parenchyma, prosenchyma, vascular or conducting tissue, tracheal and sieve tube, laticiferous and glandular tissue; tissue systems, epidermal ground tissue, and vascular or conducting; the internal structure of plant organs.

III.—*Physiology.*—Nutrition, the food of plants and its absorption, osmosis, root pressure, photosynthesis, translocation and storage of food, transpiration and exudations, the nutrition of parasites, saprophytes and insectivorous plants, growth, conditions influencing growth, growing regions in plant. Metabolism, the cycle of plant energy, respiration, enzymes, and the digestion of reserve food. Response to stimuli as evinced in the structure and movement of plants. Sexual and asexual reproduction.

IV.—*Ecology.*—The reaction of plants to their environment as illustrated by aquatic plants, hygrophytes, mesophytes, and xerophytes; floral mechanisms and seed dispersal.

V.—*Classification.*—Principles of classification. A detailed knowledge of the following types and groups :—

Bacteria, Cyanophyceæ, Diatomaceæ, Conjugatæ, Chlorophyceæ (Protococcus and Oedogonium), Phæophyceæ (Fucus), Characeæ, Rhodophyceæ, Phycomycetes (Pythium), Ascomycetes (Claviceps and Eurotium), Basidiomycetes, (Puccinia, Agaricus and Ustilago), Lichens, Hepaticæ (Fegatella), Musci (Funaria), Filicinæ (Nephrolepis), Equisetaceæ (Equisetum), Selaginellaceæ (Selaginella).

Cycadaceæ, Coniferæ, Gramineæ, Palmæ, Liliaceæ, Amaryllidaceæ, Scitamineæ, Orchidaceæ, Anonaceæ, Cruciferae, Malvaceæ, Rutaceæ, Anacardiaceæ, Leguminosæ, Combretaceæ, Myrtaceæ, Cucurbitaceæ, Rubiaceæ, Compositæ, Apocynaceæ, Asclepiadaceæ, Convolvulaceæ, Solanaceæ, Scrophulariaceæ, Verbenaceæ, Labiatæ, Amarantaceæ, Nactaginaceæ, Euphorbiaceæ, Urticaceæ,

VI.—*Evolution*.—Theories of Evolution; Genetics including the work of Mendel.

Practical Examination.

Each candidate must produce a certificate from the Head of the Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council, on the recommendation of the Board of Studies, and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

The practical examination shall include detailed botanical description of plants; the identification of the natural orders mentioned in paragraph V above; the use of a flora (the natural order being given) to identify phanerogamic genera and species; the making of hand sections of plant parts for microscopic examination.

The two papers and two practicals shall deal with the following subjects:—

Paper I and Practical.—External Morphology, Classification, Evolution. 75 marks.

Paper II and Practical.—Internal Morphology, Physiology, Ecology. 75 marks.

(ii) *Zoology*.

Pass Examination.

(Two Papers and two Practicals.)

General Biology.—

The distinctive properties of living and non-living bodies.

Distinction between animals and plants.

The distinctive properties of protoplasm.

The cell, its structure, contents and its method of division.

An elementary knowledge of evolution.

A.—Plants.

1. The plant body, its parts, their forms and arrangement.
2. The internal structure of plants.
3. The functions of plant parts and tissues.
4. The principal divisions of the plant kingdom.

The above points are to be studied in an elementary manner from common plants and in addition the following types are to receive special attention—

Bacillus, Yeast, Mucor, Spirogyra, Nephrolepis, Cycas, Maize, Bean, Nymphaea.

B.—Animals.*Histology.*—

The different kinds of animal tissues: Blood, epithelia, connective tissue, cartilage, bone, muscles and nerves.

Physiology.—

Irritability, respiration, secretion, excretion, circulation of blood and metabolism: The above treated in an elementary way.

Development.—

Elements of reproduction, sexual and asexual; embryology of the frog's egg up to the formation of the germinal layers.

Candidates must show a personal acquaintance with dissection, structures, functions, and life-history of the following animals:—

Amoeba, Paramoecium, Herpetomonas, Laverania, Leucosolenia, Hydra, Pheretima, Nereis, Hirudo, Tænia, Panulirus. Mosquito (external morphology only), Periplaneta, Ampullaria, Carcharias, Rana, Snake (Zamenis) and Lepus.

The descriptive characters of the principal Phyla and Classes of the animal kingdom with the following exceptions:—

Mesozoa, Nemertinea, Acanthocephala, Rotifera, Polyzoa, Brachiopoda, Chaetognatha, Archi-Annellida, Echiuroidea, Sipunculoidea, Lower Chordates and Cyclostomata.

Practical Examination.

Every candidate shall complete a laboratory course in accordance with the regulations issued from time to time by the Academic Council, on the recommendation of the Board of Studies. Each candidate shall produce a certificate from the Principal of his College that he has completed in a satisfactory manner the prescribed course. Every candidate must record his observations directly in his laboratory journal. Every journal is to be signed periodically by a member of the laboratory staff and certified by him at the end of the year. Candidates are to produce their journals at the practical examination and such journals may be taken into account by the Examiners in assigning marks.

Practical work.

(1) The recognition, dissection, examination, and description, of the animals and plants and parts of them mentioned under A and B above.

(2) The use of the microscope in examining the structure of animals and plants. The preparation of the animals and plants and parts of them mentioned under A and B above for the microscope.

Honours Examination.

(Two Papers and two Practicals.)

Cytology.—Cell, Mitosis, Meiosis and Fertilization.

Histology.—Epithelia, Connective Tissues, Cartilage, Bone, Muscles, Nerves, Blood, Lymph, Tooth, Glandular Tissue (Pancreas, Liver, Gastric Glands, Spleen), Kidney and Reproductive Organs.

Physiology.—Elements of Animal Physiology as stated in the book recommended for the purpose.

Embryology.—Common types of Segmentation of the Zygote. Development of the Frog up to the formation of the three Germinal Layers.

Philosophy of Zoology.—Evidences of Organic Evolution, Evolutionary Theories of Lamarck, Darwin, De Vries, Weismann ; Heredity : Mendelism.

Systematic Zoology.—All the classes of the Animal Kingdom should be studied as thoroughly as possible with the following exceptions :—

Mesozoa, Nemertinea, Acanthocephala, Rotifera, Polyzoa, Brachiopoda, Chaetognatha, Archi-Annellida, Echiuroidea, Sipunculoidea.

Candidates must show a personal and practical acquaintance with dissections, structures, functions and life-history of such animals as may from time to time be prescribed by the Academic Council on the recommendation of the Board of Studies.

The following animals are at present prescribed :—

Amoeba, Paramoecium, Vorticella, Herpetomonas, Laverania, Leucosolenia, Grantia, Hydra, Obelia, Tealia, Taenia, Distomum, Nereis, Hirudo, Pheretima, Panulirus, Periplaneta, Culex or Anopheles, Placuna, Ampullaria, Ariophanta, Sepia, Asterias, Cucumaria, Carcharias, Rana, Calotes, Poisonous Snakes (identification only), Columba, and Lepus.

The following larvae should be studied :—

Cercaria, Trochophore, Nauplius, Megalopa, Zoea, Glochidia and Ascidian Tadpole.

The skulls of the following :—

Orin thorhynchus, any Phelangeried, Macropus, Equus, Ovis Canis and Pteropus.

Practical Examination.

Each candidate must produce a certificate from the Head of the Zoology department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council, on the recommendation of the Board of Studies, and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals and a series of not less than twelve preparations of animals or animal tissues for the microscope at the practical examination. Such journals may be taken into account by the Examiners in assigning marks.

The practical examination shall consist of dissections and detailed zoological description and identification of the animals prescribed above and preparation and identification of sections of animals and their structure under the microscope prescribed as above.

The two papers and two practicals shall deal with the following subjects :—

Paper I.—Invertebrates, Cytology and Histology.

Paper II.—Vertebrates, Embryology and Evolution.

Practical I.—Dissection of animals.

Practical II.—Identification of animals and their parts, and *viva voce*.

Standard for Passing the Examination.

R. 31. Candidates who appear only for the Pass Degree Examination must, in order to pass the examination, obtain at least 30 per cent. of the full marks in (i) Compulsory English, and (ii) the Optional Group. In group (a) candidates must also obtain at least 25 per cent. of the full marks assigned to each language of the group and in groups (e) and (f) at least 30 per cent. of the full marks allotted to the practical examinations taken together.

R. 32. A candidate who has obtained 40 per cent. of the total marks in any subject at any one examination may be excused from appearing in that subject (provided he has obtained the minimum in the practical of that subject required under Regulation 31) at a subsequent examination and will be declared to have passed the examination when he passes in the remaining subject as required under Regulation 31.

R. 33. Candidates who appear for the Honours Examination in English, Latin, Greek, Sanskrit, Pali, Ardha-Magadhi, Avesta-Pahlavi, Persian, Arabic, Hebrew, German, French, Portuguese, History and Economics, or Mental and Moral Philosophy must obtain at least 30 per cent. of the full marks in (i) Compulsory English and (ii) the four Optional Pass papers (taken together): Provided that if a candidate offers more than one language, he must obtain a minimum of 25 per cent. in each language. Candidates will be declared to have passed with First Class Honours if they obtain not less than 60 per cent. of the total number of marks in all the Honours papers (as defined in Regulation 20) of the subject or group in which they appear for Honours and with Second Class Honours if they obtain not less than 40 per cent. of the total number of marks in all the above papers. Those who obtain less than 40 per cent. but not less than 30 per cent. in the pass papers will be entitled only to the Pass Degree and will be placed in the same list with those who have obtained the Pass Degree. Candidates who offer only one language shall be eligible for a Pass Degree if they obtain 30 per cent. in the total of the seven papers.

R. 34. Of those candidates who appear for Honours in Mathematics, Physics and Chemistry, or Botany and Zoology, and have obtained not less than 30 per cent. of the full marks in Compulsory English, such as have obtained not less than 60 per cent. in their Honours papers or papers and practical examinations as the case may be, will be declared to have obtained First Class Honours, and such as have obtained not less than 40 per cent. will be declared to have obtained Second Class Honours. Those who obtain less than 40 per cent. will be declared to have obtained a Pass Degree if the Examiners of the Groups recommend that the Pass Degree be given. In Groups (e) and (f), candidates for Honours, in order to be entitled to Honours, must obtain also at least 30 per cent. of the full marks in the written papers and 40 per cent. in the practical examinations *in each subject* of the group.

- R. 35. Should, however, a candidate for the Honours Examination in any subject fail under not more than one head of passing, he shall be declared to have passed the examination in the class to which his marks entitle him if, on a review of his marks, a majority of not less than two-thirds of the Examiners present decide that he should pass: Provided always that no candidate shall so pass unless he obtains an aggregate of at least 40 per cent. of the grand total of the marks for the whole examination.
- R. 36. A candidate who has obtained 40 per cent. of the total marks in Compulsory English at any one examination but failed to pass in the Honours Examination will, if his Honours subject be a subject other than English, be excused the examination in Compulsory English and allowed to appear for the Honours Examination on a subsequent occasion. He will be required to take all papers excepting those in Compulsory English and will be eligible for First or Second Class Honours if he qualifies for them according to Regulation 33 or 34. A candidate appearing for an Honours Degree, who fails in Compulsory English but obtains at least 45 per cent. of the full marks assigned for Honours, will be allowed to take an Honours Degree in the class to which his marks entitle him on passing in Compulsory English at a subsequent examination. A candidate for an Honours Degree who fails in Compulsory English, but obtains at least 40 per cent. of the full marks in all the papers (or papers and practical examinations) of the Optional Group taken together, will be declared to have passed the Pass Examination on passing in Compulsory English at a subsequent examination. Candidates passing the examination in compartments according to the provisions of this Regulation and Regulation 32 will not be eligible for any prizes or scholarships awarded at the examination.
- R. 37. A candidate who has been found qualified for a Pass Degree will be permitted to appear on a subsequent occasion at the examination for the degree of B.A. with Honours, provided he has completed the minimum attendance in a recognized College at a course of instruction in the subject in which he has to appear during two terms. He will be required to take all the Honours papers as defined in Regulation 20 and will be eligible for First or Second Class Honours if he qualifies for them according to Regulations 33 and 34. But a candidate, who, previous to graduation, has attended during four terms Honours courses in a subject at an affiliated College but has qualified for a Pass Degree, will not be required to keep any additional terms if he offers the same subject.
- R. 38. A candidate who has been found qualified for the Degree with First or Second Class Honours in any subject or group will be permitted to appear on a subsequent occasion for the Honours Examination in another subject or groups, provided he has completed the minimum attendance in a recognized College at a course of instruction in the subject in which he has to appear during two terms. He will be required to take all the Honours papers as defined in Regulation 20 and will be eligible for First or Second Class Honours if he qualifies for them according to Regulations 33 and 34. Candidates passing the examination according to the provisions of this Regulation and Regulation 37 will not be eligible for any prizes or scholarships awarded at the examination.

CHAPTER V.—MASTER OF ARTS.

Admission.

O. 203. (a) Any person, being a Bachelor of Arts in the University of Bombay, may, after he has spent at least two years subsequent to his passing the B. A. Examination, be admitted to the examination for the degree of Master of Arts, and, should he pass the examination in any one of the branches mentioned in Regulation 39 he will be admitted to the degree of M. A.

(b) A Bachelor of Arts of a University recognized by this University will also be admitted to this examination : Provided he submits with his application a certificate, signed by the Principal of an affiliated Arts College or by a University Professor, Reader or Lecturer, to the effect that he has studied for the examination under the direction of Professors in any College affiliated to this University, or Professors, Readers or Lecturers in this University, for a period of two years after passing the B. A. Examination of his own University. Candidates appearing under the provisions of this Ordinance will not be eligible for the Chancellor's Medal awarded at the examination.

O. 204. On a new application being forwarded and a fresh fee paid, a candidate who has already passed in one branch of the examination may appear on a subsequent occasion in a different branch : Provided, however, that a candidate who has passed in one of the alternative Groups of Branch IV (Mathematics) may similarly appear in the other Group. A candidate who has passed the examination in one Principal language will be permitted to reappear at the examination, on the submission of a new application and payment of the full fee, in a Principal language other than the one in which he has once passed and will, on passing in such additional Principal language, be granted a certificate to that effect. Candidates thus reappearing at the examination in a Principal language will not be eligible for a class or for University awards.

R. 39. The Examination will comprise the following Branches :—

- I.—Languages.
- II.—History.
- III.—Philosophy.
- IV.—Mathematics.
- V.—Ancient Indian Culture.

Syllabus.

R. 40. I.—LANGUAGES.—(Eight Papers.)

Consistently with the options given below, candidates must offer any two languages, one of them being taken as a Principal language and the other as a Subordinate one. There will be six papers in the Principal language and two in the Subordinate language. There will also be an oral examination in each living language other than English both for candidates who take the language as a Principal language as well as for those who take it as a Subordinate one.

Each paper in these languages will carry 100 marks where there is no oral examination and 90 marks where there is an oral examination. The oral examination will carry 60 marks if the language is taken as a Principal language and 20 marks if taken as a Subordinate one.

(i) The groupings of languages will be as follows :—

Group I

English, French, German and Portuguese.

Group II

Classical groups.

- | | |
|-----------------------------------|------------------------------|
| (a) Latin, Greek. | (f) Pali,* Ardha-Magadhi.† |
| (b) Latin, or Greek,
Sanskrit. | (g) Hebrew, Arabic. |
| (c) Sanskrit, Avesta-Pahlavi. | (h) Avesta-Pahlavi, Persian. |
| (d) Sanskrit, Pali. | (i) Arabic, Persian. |
| (e) Sanskrit, Ardha-Magadhi. | |

Group III

Gujarati, Marathi, Kannada, Urdu.

(ii) The options will be allowed as follows :—

Option (A)—Any pair of Group I.

Option (B)—Any one of Group I with any other language.

Option (C)—Any sub-group of II.

Option (D)—Any one of Group III with a related language in Group II.

For the purposes of Option (D), the following combinations are considered as related :—

- (i) Marathi with Sanskrit or Pali or Ardha-Magadhi or Hebrew.
- (ii) Gujarati with Sanskrit or Pali or Ardha-Magadhi or Persian or Avesta-Pahlavi.
- (iii) Kannada with Sanskrit.
- (iv) Urdu with Persian or Arabic.

(1).—ENGLISH.

In English there will be four courses in which six three hours' papers carrying 100 marks each will be set. Candidates taking English as the Principal language will be required to answer all six papers. Those who take English as Subordinate to another language will be required to answer Papers II and VI only.

Course I, Paper I.—Either

- (a) English Literature and life up to 1450, illustrated by texts from Old and Middle English Literature,

or

- (b) English life and literature from 1300–1550 illustrated from Chaucer and other verse and prose of the period.

*Subject to the condition that a candidate taking this language has passed in Sanskrit or Pali at any preceding examination conducted or recognized by this University.

† Subject to the condition that a candidate taking this language has passed in Sanskrit at any preceding examination conducted or recognized by this University.

In either alternative, candidates will be required to translate passages from the prescribed texts into modern English. They will be expected to show a sound knowledge of the texts from the literary point of view and an acquaintance with the social life and customs and the outlines of the political history of the period selected.

Course II, Paper II.—A special study of five plays of Shakespeare with their social background.

Paper III.—Shakespeare: a general study of his works, dramatic and lyric, in relation to the life, manners, and theatres, of the period.

Course III, Papers IV and V.—A special period of the history of Modern English Literature, together with particular study of three poets and three prose writers of the period. The period shall be the century following that prescribed for the Honours B. A. Examination two years previously. The Academic Council, on the recommendation of the Board of Studies, will notify each year how this course will be distributed between Papers IV and V.

Course IV, Paper VI.—A special form of literature is to be studied in relation to the foreign models which have influenced growth and character.

[*Note.*—Answers to questions in all the six papers are expected to have the literary qualities and form of an essay, and Examiners shall bear this in mind in deciding the form of the questions and the number of them to be answered.]

(2).—LATIN.

Subordinate.

Paper I.—Unseen passages for translation and composition.

Paper II.—Select texts from the Latin Literature along with the history of the literature represented by the same texts.

Additional for Principal.

Paper III.—A general account of the origin and growth of the Latin language, and its linguistic character.

Paper IV.—On the political, social and religious life of Ancient Rome.

Papers V and VI.—On the prescribed books, including points of scholarship and criticism.

(3).—GREEK.

Subordinate.

Paper I.—Unseen passages for translation and composition.

Paper II.—Select texts from the Greek Literature along with the history of the literature represented by the same texts.

Additional for Principal.

Paper III.—An account of the origin and the growth of the Greek language, its general linguistic nature and the main characteristics of the chief Greek dialects.

Paper IV.—On the political, social and religious life of Ancient Greece.

Papers V and VI.—On the books prescribed, including points of scholarship and criticism.

(IV).—HEBREW.

Subordinate.

Paper I.—Unseen passages for translation and composition.

Paper II.—Select texts from the Hebrew Literature along with the history of the literature represented by the same texts.

Additional for Principal.

Paper III.—An account of the origin and growth of the Hebrew language, its linguistic character, and its relation to Western Aramaic and Neo-Hebraic (Mishnaic) languages.

Paper IV.—On the political, social and religious life of the people.

Papers V and VI.—On the books prescribed, including points of scholarship and criticism.

(V).—PERSIAN, ARABIC AND URDU.*

Subordinate.

Paper I.—One paper on prescribed poetry texts, including points of scholarship and criticism, and unseen passages for translation both from and into the language.

Paper II.—One paper on prescribed prose texts, including points of scholarship and criticism, and unseen passages for translation both from and into the language.

Additional for Principal.

Paper III.—One paper on prescribed poetry texts which will be of a more difficult character than those for the subordinate papers, including points of scholarship and criticism.

Paper IV.—One paper on prescribed prose texts which will be of a more difficult character than those for the subordinate papers, including points of scholarship and criticism.

Paper V.—One paper containing unseen prose and poetical passages for translation from English into the language and *vice versa*, including in the latter, explanation, if desired.

* Candidates have the option of answering all the questions in the papers in this language (except the one for translation into English) in Urdu.

Paper VI.—A general paper containing—

- (a) An essay in the language on a subject connected with the history of the literature or the subjects of the prescribed books, carrying about half the marks.
- (b) Paraphrase in the language of an unseen passage, general questions on the texts and on the history of the language and literature, and on philosophy, prosody and rhetoric, carrying about half the marks.

A candidate may offer a thesis in lieu of the four *principal* papers in Persian or Arabic on the following conditions :—

(a) At least six months before the date of the examination, the candidate shall submit his application to the University, stating the subject of his thesis, the work already done by him in that subject, and the course of reading and the method of treatment adopted for the thesis. The candidate shall also indicate what he considers as the special importance and the claim to originality of his work on the thesis.

(b) The above application shall be endorsed by the University Professor, or by an approved Professor of Persian or Arabic in an affiliated Arts College, or by some other scholar recognized by the University, under whose guidance the candidate is working, certifying that the subject of the thesis is a proper one and that the reading and research work done by the candidate is sufficient to make the thesis an equivalent of the four papers in either language.

(c) A copy of the thesis written in a neat, legible hand shall be submitted in triplicate to the University at least four months before the date of the examination, along with a declaration by the candidate that the thesis is *bona fide* his own work, the Board of Studies thereupon appointing at least two Judges for the thesis.

(d) The submission of a thesis will not be a bar to the candidate's appearance at the ordinary examination.

(6).—FRENCH.

Subordinate.

Paper I.—Translation from French into English and English into French. (All unseens.)

Paper II.—A paper on two modern authors, including points of scholarship and criticism. (Texts prescribed.)

Additional for Principal.

Paper III.—A paper on Early French, both language and literature, including points of scholarship and criticism. (Authors prescribed.)

Paper IV.—A period of the history of French literature. (Books to be prescribed from time to time.)

Paper VI.—An essay to be written in the French language.

(7).—GERMAN.

Subordinate.

Paper I.—Translation of Unseens : English-German, German-English and Paraphrase.

Paper II.—Special period of Modern German Literature with particular study of two prose writers and two poets.

Additional for Principal.

Paper III.—Special form of German Literature.

Paper IV.—Middle High German :—

(a) Middle High German texts and Grammar : Acquaintance with Old High German Grammar sufficient to enable the candidates to explain the forms of Middle High German will be expected ;

(b) Middle High German Period of Literature : a knowledge of the literature of the period as well as of the social and political conditions is required.

Paper V.—Prose and poetry texts bearing on the special form and the special period of German Literature under Papers II and III, including the texts under Paper II.

Paper VI.—An essay in German on a topic from the German Literary History or from the Social or Political History of Germany in the 18th and 19th centuries with a bearing on German Literature.

(8).—PORTUGUESE.

[N.B.—Papers I and III only are to be answered by those taking Portuguese as the Subordinate Language.]

Paper I.—Unseens : Translation from English into Portuguese and *vice versa*.

Paper II.—A study of the Portuguese language with special reference to some *prescribed* specimens of pre-Camonean literature.

Paper III.—A detailed and critical study of a *prescribed* portion of Camoens' works. [Some questions may be required to be answered in Portuguese.]

Paper IV.—A general study of all the works of Camoens with relation to his life and age.

Paper V.—A *prescribed* period of the History of Portuguese Literature. The period shall be that following the period prescribed for the B. A. Examination two years before.

Paper VI.—A special study of two poets and two prose-writers of the period prescribed for Paper V, with particular reference to some of their *prescribed* works (*i.e.*, *Texts* other than Camoens and pre-Camonean).

[*Note.*—Answers to questions in all the six papers are expected to have the literary qualities and form of an essay, and Examiners shall bear this in mind in deciding the form of the questions and the number to be answered.]

(9).—SANSKRIT, PALI, ARDHA-MAGADHI AND
AVESTA-PAHLAVI.

Subordinate.

Paper I.—Unseen passages for translation and composition.

Paper II.—Select texts from the literature of the language along with (wherever possible) the history of the literature represented by the select texts.

Additional for Principal.

Paper III.—A general account of the origin and growth of the language, its linguistic character, and its relation to other allied languages (classical, and where possible, vernacular).

Sanskrit.

Paper IV.—Of the Veda, *either* portions or selections from the Ṛgveda *or* from the Ṛgveda as well as the other Vedas.

Papers V and VI.—On any *one* out of the ten Śāstras prescribed for M. A. Examination.

Ardha-Magadhi.

Paper IV.—The Agama Literature.

Papers V and VI.—The Philosophical Literature (corresponding to Śāstra paper in Sanskrit).

Pali.

Paper IV.—The Older Nikayas.

Papers V and VI.—The Abhidhammal Literature.

Avesta-Pahlavi.

Paper IV.—The five Gathas of Avesta.

Papers V and VI.—The rest of Avesta and Pahlavi.

A candidate may offer a thesis in lieu of the four *Principal* papers in Sanskrit, Pali and Ardha-Magadhi on the following conditions :—

(a) At least six months before the date of the examination the candidate shall submit his application to the University, stating the subject of his thesis, the work already done by him in that subject, and the course of reading and the method of treatment adopted for the thesis. The candidate shall also indicate what he considers as the special importance and the claim to the originality of his work on the thesis.

(b) The above application shall be endorsed by the University Professor, or by an approved Professor in that language in an

affiliated Arts College, or by some other Scholar recognised by the University, under whose guidance the candidate is working, certifying that the subject of the thesis is a proper one and that the reading and research work done by the candidate is sufficient to make the thesis an equivalent of four ordinary papers.

(c) A typed copy of the thesis (written in English) shall be submitted in triplicate to the University at least two months before the date of the examination, along with a declaration by the candidate that the thesis is *bona-fide* his own work, the University thereupon appointing at least two judges for the thesis.

(d) After the candidate's application for the examination by thesis is admitted, the candidate shall not be allowed to take *in that same year* the ordinary examination by papers in lieu of the one by thesis.

(10).—MARATHI.*

Subordinate.

Paper I.—(a) Unseen passages for translation from English into Marathi.

(b) Unseen passages in Marathi for explanation and criticism in Marathi.

(c) Composition in Marathi.

Paper II.—(a) Suitable prose and poetical texts of the modern period.

(b) A general outline of the history of the Marathi Language and Literature.

Additional for Principal.

Paper III.—A suitable period of Marathi Literature with a special study of some specified authors of that period for detailed and intensive study.

Paper IV.—A study of the origin, structure and development of the vernacular, including its principal dialects with special reference to philology.

Paper V.—Prescribed texts of the mediæval period of the vernacular.

Paper VI.—A special form of literature with special reference to the various forces that moulded that form; some typical texts being prescribed for study.

(11).—GUJARATI.†

The syllabus in Marathi applies *mutatis mutandis* to Gujarati.

*Candidates have the option of answering all the questions except the one for translation into English in the papers in this language in Marathi.

†Candidates have the option of answering all or any of the questions in the papers in this language (except the one for translation into English) in the vernacular.

(12).—KANNADA.

Subordinate.

Paper I.—A general history of the origin and growth of the Kannada language and history of its literature during the prescribed period.

Paper II.—Poetry : Questions on the works (including Champu) of three standard authors prescribed with points of scholarship and criticism.

Additional for Principal.

Paper III.—Prose : A critical study of the works of two poets and two prose-writers (including Dramas) written in *Hosagannada*. The books to be prescribed.

Paper IV.—An essay in the language on a subject connected with the history of literature of subjects of the prescribed books carrying about half the marks, and paraphrase of unseen passages in the language.

Paper V.—Unseens : Translation from English into the language and *vice versa*.

Paper VI.—Questions from the text-books prescribed on rhetoric including questions on prosody, philology and comparative grammar, with special reference to the Dravidian and other languages as influencing the growth and character of Kannada.

R. 41.

II.—HISTORY.—(Eight Papers.)

Candidates may (at their option) submit to a written examination of eight papers in *any two* of the following four groups, or they may offer a thesis on a subject dealt with in any of these groups in lieu of the *whole* of the written examination.

Group A.

1. English Constitutional History.
2. A special period of Indian History to be chosen from the following *or* a special period of Ancient Persian History :—
 - (a) Ancient India.
 - (b) Mahomedan India.
 - (c) The Marathas, Sikhs and Rajputs.
 - (d) European Powers in India.
3. Theory of Politics.
4. Comparative Politics.

Group B.

1. Mediæval History.
2. Modern History.
3. British Colonial History.
4. Historical Essay.

Group C.

1. Economic History.
2. Advanced Economic Theory.
3. Indian Economics.
4. An Essay on Economics.

Group D.

1. Nature and Scope of Sociology.
2. Social Institutions.
3. Indian Social Institutions.
4. Sociological Essay.

R. 42.**III.—PHILOSOPHY.—(Eight Papers.)**

[N. B.—Candidates may (at their option) submit to a written examination of eight papers as described below, or they may offer a thesis connected with one or more of the subjects prescribed for the papers in lieu of the *whole* of the written examination.]

A.—NECESSARY PAPERS.

1. History of Ancient Philosophy. (One Paper.)
2. History of Modern Philosophy. (One Paper.)
3. Moral Philosophy. (One Paper.)
4. Psychology. (One Paper.)

B.—OPTIONAL PAPERS.*(i) Philosophy.*

1. Natural Theology *or* the History of Indian Philosophy. (One paper.)
- 2-3. Any two of the following Philosophies (Two Papers) :—
 - (a) The Philosophy of Plato.
 - (b) The Philosophy of Aristotle.
 - (c) The Philosophy of Kant.
 - (d) Sankhya.
 - (e) Buddhism.
 - (f) The Advaita of Shankaracharya.
 - (g) Vishishtadvaita of Ramanujacharya.
4. Essay. (One Paper.)

OR

*(ii) Sociology.—(Four Papers.)***(i) NATURE AND SCOPE OF SOCIOLOGY.—(One Paper.)**

Origin and progress of Sociology, in observation and interpretation of human societies in their life and working their institutions and products ; concrete studies thus becoming general.

Sociology especially aided by studies of life and mind (Biology and Psychology). Conception of Evolution ("progress" or "deterioration") in societies.

Other associated Sciences ; leading classifications of the Sciences and Arts.

Social life and organization thus influenced by various factors ; (a) Physical and geographic (climate and natural resources as determining fundamental occupations) ; (b) Biological : nutrition and reproduction, heredity and variation, Ethnography ; (c) Psychological factors ; (d) Ethical factors ; (e) Religious factors ; (f) All these through time (Historic factors).

Outlines of Archæology. Palæolithic and Neolithic ages ; Bronze and Iron ages.

Main Historic Periods of Western and Indian Civilization.

(ii).—SOCIAL INSTITUTIONS.—(One Paper.)

Forms of Social Organization.

Economic Organization.

Main types of occupation ; their later and modern developments.

Slavery and Serfdom.

Contract and Wages.

Forms of Industrial Co-operation.

Class and Caste distinctions.

Other Forms of Social Organization.

Constructive elements in human life.

Sex and the Family ; position of woman ; history of marriage.

Paternal and maternal descent ; property and inheritance.

Educational systems.

The clan ; the tribe ; the caste ; the race ; the nation.

The State ; City-states, Modern States, Empires and larger groupings.

Village, town, and city ; conditions of city development : methods of survey.

Origin and growth of Moral and Religious Ideas.

Early beliefs : their relation to family, marriage, position of woman, property, clan and tribe, treatment of strangers, etc.

Further moral developments ; Moral education as social.

Religious institutions, rituals and priesthoods.

Social value of Religion.

Significance of Art.

Social Order and Law.

Disruptive forces in life : Blood-feuds, Retaliation, Compensation, etc.

Primitive Courts and Processes : Growth of Public Justice.

Social Evils : Poverty, Ignorance, Vice and Crime, etc.

Responsibility : Punishment and prevention of crime,

Economic and social conditions (and moral conceptions) as modifying past laws and evolving new ones.

Administration, municipal and general.

Civil Equality and Political Liberty.

Study of Sociology as introductory to Political Science and Philosophy and helpful towards Social Service.

(iii)—INDIAN SOCIAL INSTITUTIONS.—(One Paper.)

The village. The caste. Panchayats. The family (Matriarchal Malabar system and traces elsewhere). Marriage. Adoption. Education. Foreign elements. Assimilation and Segregation. The Depressed Classes.

Mahomedan influence, and influence on Mahomedans of Indian Institutions. Law and Custom. The sphere of the State. Effects of British Rule on Indian Society.

(a) A thesis will be accepted in lieu of the whole of the written examination in History or in Philosophy.

(b) The candidate shall submit, on or before the first Monday in February, along with his form of admission and examination fee, a statement giving the title of the thesis and a synopsis of the same, sufficient to give a general idea of the contents of the thesis. The statement shall be accompanied by a declaration that the thesis will be the candidate's own *bona fide* production and an account of the reading and research work he has done and is doing in connection with its preparation. The thesis itself should be submitted in triplicate on or before the third Monday in April. This declaration and statement shall be endorsed by the Professor of Sociology, History, Philosophy or Economics in the University School of Economics and Sociology or in a First Grade College affiliated to the University, under whose guidance the candidate has carried through his studies and researches. The Professor shall also state whether he is of opinion that the thesis may be accepted and submitted to the examination. A thesis which is submitted under the joint names of the candidate and another worker will not be accepted.

(c) If the said Professor certifies that he is of opinion that the thesis may be accepted, the Board of Studies shall submit the thesis to a referee or referees, who shall, after a *viva voce* test, if necessary, on the subject of the thesis to which the candidate shall be required to submit, report to the Registrar the number of marks he or they assign to the thesis out of a maximum of 800 marks. If the candidate gets less than 300 marks, he will be declared to have failed in the examination. If he gets 300 or a higher number of marks he will be declared to have passed or passed in the First or Second Class according to the standard laid down in Regulation 46 (pp. 176-177).

(iv).—ESSAY.—(One Paper.)

R. 43.

IV.—MATHEMATICS.—(Eight Papers.)

[N. B.—If a candidate has passed his M. Sc. Examination in one of the Mathematics groups A or B, he will have to appear for the other group to qualify for the degree of M. A.]

Candidates must select one of the following Groups.

GROUP A.—*Pure Mathematics.*

Paper I.—Algebra and Theory of Equations.

Paper II.—Solid Geometry.

Paper III.—Pure Geometry, Plane and Spherical Trigonometry.

Paper IV.—Plane Analytical Geometry and Higher Plane Curves.

Papers V and VI.—Modern Analysis, Differential Equations.

Paper VII.—Statics, Attractions, Dynamics of a particle and of rigid bodies.

Paper VIII.—Hydrostatics, Spherical Astronomy.

Instead of Papers VII and VIII, candidates may offer any one of the following groups on which two papers will be set :—

1. Higher Algebra and the Theory of Finite Groups.
2. Theory of Functions of a Real Variable.
3. Theory of Functions of a Complex Variable.
4. Elliptic Function and Algebraic Functions.
5. Theory of Numbers.
6. Differential Equations.
7. Projective Geometry, Non-Euclidean Geometry and Line-Complex.
8. Differential Geometry.
9. Fourier's Series and Harmonic Analysis.
10. Calculus of Variations and Integral Equations.

GROUP B.—*Applied Mathematics.*

Paper I.—Differential and Integral Calculus, Solid Geometry.

Paper II.—Differential Equations, Fourier's Series and Spherical Harmonics.

Paper III.—Statics, Attractions and Theory of Potential, Elementary Elasticity.

Paper IV.—Dynamics of a particle, Rigid Dynamics.

Paper V.—Hydrostatics, Hydrodynamics and Sound.

Paper VI.—Electricity and Magnetism, Relativity.

Papers VII and VIII.—Two papers on any one of the following groups :—

1. Elasticity.
2. Higher Dynamics.
3. Hydrodynamics and Theory of Tides.
4. Optics and Sound.
5. Celestial Mechanics.
6. Electricity and Magnetism and Relativity.

In each of the above groups the requisite knowledge of Vector Analysis and Quaternions will be assumed.

R. 44.

(a) A candidate selecting any one of the special subjects in Group A or B must intimate his intention of so doing to the Registrar

at least six months before the date of the examination and should further indicate the general extent and nature of his reading.

(b) Instead of the Papers (VII and VIII) in a special subject in the Mathematics (Groups A and B) courses for the M.A. and M.Sc. Examinations, a candidate may present a thesis on any particular branch of his special subject and if this thesis gives evidence of originality either in method or results according to a report by the referees appointed in consultation with the Board of Studies, the candidate will be excused from appearing in these two papers. If, in the opinion of the referees, the thesis shows exceptionally high merit, the candidate may at his option be excused from any two more papers required in the examination.

(c) This option shall be granted only to candidates who have passed either the B.A. Examination with Honours in Mathematics or the B.Sc. Examination with Mathematics as their Principal Subject at least in the Second Class.

(d) Every thesis shall be certified by a Professor of this University or by an approved Professor of an affiliated College as being mainly the student's own work.

(e) Every thesis shall be prefaced by a statement showing what results were already known on the subject matter of the thesis and what the candidate claims as his own contribution in method or results or both.

(f) The thesis will be referred to referees only if the Board of Studies considers that there is a *prima facie* case for doing so.

(g) The referees may require the candidate to submit to an oral test on the subject matter of the thesis, if necessary.

(h) Every candidate desirous of submitting a thesis must intimate his intention of doing so, in writing, to the Registrar at least six months before the examination. The thesis itself should be submitted four months beforehand in triplicate.

Text-books will be recommended at least two years before the commencement of the examination.

R. 45. V.—ANCIENT INDIAN CULTURE.—(Eight Papers.)

(1) Origin and Evolution of Indian Social and Political Institutions (Two Papers).

(2) Origin and Development of Indian Religion and Philosophy (Two Papers).

(3) Archæology and Epigraphy (One Paper).

(4) Linguistic data as source for Cultural History (One paper).

(5) Early Literature (One Paper).

(6) Early History up to 800 A. D. (One Paper).

Standard for Passing the Examination.

R. 46. (a) To pass the M.A. Examination in Languages, a candidate must obtain 25 per cent. marks in each of the eight papers, 30 per cent. in the total of the two papers in his Subordinate language and 40 per cent. in the total of the six papers in his Principal language. A candidate

offering a thesis in lieu of the four Honours Papers in his Principal language must obtain, in order to pass the examination, 25 per cent. of the full marks in each of the four papers in which he appears, 30 per cent. in the total of the two papers in his Subordinate language, $37\frac{1}{2}$ per cent. in the thesis and 40 per cent. in the thesis and two Pass papers in the Principal language taken together.

(b) To pass the examination in History, Philosophy and Ancient Indian Culture, the candidate must obtain (i) one-fourth of the full marks in each paper, and (ii) three-eighths of the total marks obtainable.

(c) To pass in Mathematics, the candidate must obtain either (i) one-fourth of the full marks in each paper and (ii) three-eighths of the total marks obtainable, or 40 per cent. of the total marks obtainable.

(d) Those of the successful candidates who obtain 65 per cent. of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent. in the Second Class.

BACHELOR OF COMMERCE.

GENERAL.

- O. 205.** Candidates for the Degree of Bachelor of Commerce (B. Com.) must have passed the Matriculation Examination, and will be required to pass two subsequent examinations, the first to be called the Intermediate Examination in Commerce, and the second the Examination for the Degree of Bachelor of Commerce.

CHAPTER VI.—INTERMEDIATE EXAMINATION IN COMMERCE.

Admission.

- O. 206.** No candidate will be admitted to this examination unless, after obtaining a certificate from the Principal of an Arts College, affiliated to this University showing that he has satisfactorily carried out the work appointed by the University for the first two terms in Arts, he shall have kept two terms at a College or Institution recognized by this University in Commerce, and unless he produces satisfactory testimonials in the prescribed form.

- R. 47.** Candidates will be examined in the following subjects :—
 I.—English.
 II.—Elements of Economics.
 III.—Economic Geography.
 IV.—Accounting.
 V.—Administration.

Syllabus.

- R. 48.** I.—ENGLISH—One paper—Marks 100.

Composition, commercial words and expressions, letter-writing including elementary commercial correspondence. (Importance will be attached to handwriting.)

- R. 49. II.—ELEMENTS OF ECONOMICS—Two papers of 100 marks each.

Subject matter of Economics.

Fundamental conditions of material welfare, natural resources, human energy, capital.

Influence of social customs and institutions. Relation of the size of the population to its material welfare.

Production regulated by demand. The laws of Demand and Supply. Market price. Normal price. Monopoly. Speculation.

Functions of Money. Metallic money. Paper money.

Essentials of a sound currency system.

Credit. Modern bank operations. The nature of a fully developed banking system.

Incomes from (a) property, (b) work. Causes of inequality of incomes and wealth.

The wealth of nations.

The economic functions of the State.

The essential principles underlying public expenditure, public income and public debt.

- R. 50. III.—ECONOMIC GEOGRAPHY—One paper—Marks 100.

Physical Geography as the basis of the various types of civilization, and a determining factor of national and economic development.

Chief commodities of commerce:—Agricultural and allied products, minerals and manufactures. Conditions and regions of production. Preparation for the market and chief processes. Trade.

Trade Routes by land and by sea.

Present day production and foreign trade of India, Great Britain and the leading commercial and industrial countries of the world.

- R. 51. IV.—ACCOUNTING—One paper—Marks 100.

Keeping the subsidiary books, posting into the ledger, preparing Trading and Profit and Loss Accounts and Balance Sheets of General Merchants, Partnerships, and Joint Stock Companies. Bad Debts, Depreciation and Reserves.

- R. 52. V.—ADMINISTRATION—One paper—Marks 100.

(a) A brief study of the principles underlying the Constitution of Great Britain and of the Dominions.

(b) Indian Administration, including Indian Finance.

Standard for Passing the Examination.

- R. 53. To pass the examination the candidate must obtain 40 per cent. of the full marks in each subject. Should a candidate fail to obtain

40 per cent. of the full marks in one only of the following subjects :— Elements of Economics, Economic Geography, Accounting, Administration, he should be declared to have passed the examination if, on a review of his marks, a majority of not less than two-thirds of the Examiners present at the final meeting decide that he should pass : Provided always that no candidate shall so pass unless he obtains at least 50 per cent. of the total marks in all subjects. Those of the successful candidates who obtain 60 per cent. of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent. in the Second Class.

- R. 54.** A candidate who obtains 50 per cent. of the total marks in any subject at any one examination may be excused from appearing in that subject at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each subject required by Regulation 53. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

CHAPTER VII.—EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE (B. COM.)

[*Note.*—This examination will be held under the old Regulations (*vide* Appendix A) until 1931 (inclusive).]

Admission.

- O. 207.** No candidate will be admitted to this examination unless, after passing the Intermediate Examination in Commerce at this University, or an examination of any other University considered equivalent to the Intermediate Examination in Commerce of this University, he shall have kept four terms at a College or Institution recognized by this University in Commerce, and unless he produces satisfactory testimonials in the prescribed form.

[*N.B.*—Graduates in Arts of every statutory Indian University and the University of Mysore who have passed a degree examination with Economics as one of their subjects, and graduates in Commerce of other statutory Indian Universities, and the University of Mysore, will be admitted to the B. Com. Degree Examination of this University after an attendance of four terms at a College recognized by this University in Commerce : Provided that graduates in Arts thus to be admitted pass in Accounting at the Intermediate Examination in Commerce of this University either before or simultaneously with the B. Com. Degree Examination.]

- O. 208.** A student who has passed in all subjects but one at the Intermediate Examination in Commerce in conformity with Regulation 54 will be allowed to keep terms and appear for the B. Com. Examination after keeping four terms, but will not be declared to have passed the B. Com. Examination under any circumstances, unless he has passed in the remaining subject of the Intermediate Examination held either in a previous, or in the same, examination season.

- O. 209.** A candidate who is declared to have passed the examination for the Degree of Bachelor of Commerce under Regulations 63 and 64

(pp. 185-186) will, on payment of a fresh fee of Rs. 50, be admitted to a subsequent examination without keeping any additional terms in any one of the subjects specified in Regulation 55 in which he has not already passed, and will, on passing in such additional subject, be awarded a certificate to that effect : Provided that no candidate will be allowed to appear thus for examination in more than two special subjects.

R. 55. Candidates will be examined in the following subjects :—

- I.—English.
- II.—Business Organization.
- III.—Mercantile and Industrial Law.
- IV.—Trade and Statistics.
- V.—Indian Currency and Banking.
- VI.—Modern Economic Development.
- VII.—One of the following special subjects :—
 - A.—Advanced Accounting and Auditing.
 - B.—Advanced Banking.
 - C.—Actuarial Science.
 - D.—The Organization of the Indian Cotton Industry.
 - E.—Economics of Transport.

Syllabus.

R. 56. 1.—English $\left\{ \begin{array}{l} \text{One paper, 75 marks.} \\ \text{Oral Examination,} \\ \text{25 marks.} \end{array} \right\} 100 \text{ marks.}$

A.—Written—

(i) Drafting of reports, minutes of meetings, short reports for the press, replies to questionnaires, short speeches, etc.

(ii) Commercial Correspondence.

(iii) Précis Writing.

B.—An oral examination which will aim at testing the general knowledge and intelligence of the candidates in addition to their ability to converse in English correctly and fluently.

R. 57. II.—Business Organization—One Paper of 100 marks.

The nature and constitution of business houses (Partnerships, Companies, etc.). The financing of businesses. Control and responsibility. Office routine. Methods of remuneration. Industrial efficiency and scientific management. Skilful advertising.

R. 58. III.—Mercantile and Industrial Law—One paper of 100 marks.

The Indian Law relating to Contracts, Mortgages, Joint Stock Companies, Negotiable Instruments, Charter Parties, Bills of Lading, Fire and Marine Insurance and Insolvency in Presidency Towns.

The Provisions of the Indian Stamp and Limitation Acts relating to the above.

Industrial Legislation, Indian Factory Act, Workmen's Compensation Act, Trade Union Act, etc.

R. 59.

IV.—Trade and Statistics—One Paper of 100 marks.

Trade.

Brief history of the development of India's trade with the world.

The chain of intermediaries in the trade of the country.

The financing of the internal and external trade.

The chief imports, and the countries of their origin. The importance of the Indian market to those countries.

The chief exports and their destinations.

The trans-frontier trade (Persia, Afghanistan and Tibet).

Statistics.

Collection, Tabulation, and Presentation of Data. Averages, Dispersion, Correlation. Index numbers. A brief study of British Indian statistics—Official and Non-official.

R. 60.

V.—Indian Currency and Banking. One paper of 100 marks.

Indian Currency.

Early history of demonetisation of gold. Fall in the value of silver. Herschell Committee and the closing of the mints to coinage of silver on private account. Fowler Committee and its recommendations. India and the gold mint. The Gold Standard Reserve, its composition and location. Chamberlain Commission and its recommendations. Currency during the war and after. Babington-Smith Committee and its report. Failure of the attempt to link rupee to 2s. Hilton-Young Commission and the Gold Bullion Standard.

Paper Currency—Note-issue of the Presidency Banks. History of Government Currency Notes till 1914. The effects of the war on the note-issue. Changes proposed by the Babington-Smith Committee. Proposal to transfer the note-issue to a new bank.

Indian Banking.

History of Banking in India. Classification of banking institutions. The Imperial Bank of India, restrictions on its business. Its relations with Government and other banks.

The Exchange Banks and their place in the Indian Credit System.

The Indian Joint Stock Banks—their early history. The Bank failures of 1913-14. The present position. The Shroffs: their relation to the Indian Money Market. The Co-operative credit movement: Provincial Banks, District Banks, Unions and Credit Societies.

Elements of International Trade and Foreign Exchange.

General features of international trade. The theory of international values and the equation of international indebtedness. The meaning of Foreign Exchange. The sources of supply and the demand for foreign bills. The foreign exchange rates. Mint pairs of Exchange and Specie points. Gold movements.

R. 61.

VI.—Modern Economic Development—One paper of 100 marks.

A. A brief study of the modern economic development of England, Germany, the U. S. A. and Japan.

B. A detailed study of the modern economic development of India.

England.

Economic conditions in the pre-Industrial Revolution period—The Mercantile System—Industrial Revolution—Industrial and Commercial policy—Agricultural Revolution—Commercial Revolution—Economic Imperialism—Economic Legislation of the 19th century. Trade Unionism, Socialism and kindred movements—The Great War and its effects, Post-War economic problems.

Germany.

Germany in the beginning of the 19th century; Agriculture, Industry, Commerce and Transport—Napoleonic reorganisation—The Zollverein—Development of Modern Transport—Progress of Agriculture and Industry—Commercial Expansion. German Colonisation—Industrial and Commercial policy—Labour Movements—the Great War and its effects.

The U. S. A.

Struggle for commercial and economic independence—the advent of the Industrial Revolution—the Westward Movement—Development of Transport—Economic aspects of the Civil War. Main features and causes of the agricultural, industrial and commercial development. Immigration policy—Recent tendencies.

Japan.

The Economic reconstruction of Japan—Industrialisation of Japan and the Policy of the State—Lines and causes of recent economic progress in the country—Economic effects of the Great War on Japan.

India.

Economic conditions at the break-up of the Mogul Empire—A century of economic disorder—Parliamentary control—Industrial decline—Policy of preference to British interests. Abolition of the Company's Trade Monopoly—Early Land Settlements in various Provinces—Development of Mechanical Transport—Industrial Revolution—Commercial Revolution—Commercial, industrial and agricultural policy of the Government—Transition in Agriculture, Land Settlements, Land Tenures, Irrigation. Co-operation, Famines, etc.—Industrial development—Labour Legislation—Rise of economic

nationalism—Change in the economic policy of the Government—Fiscal Autonomy—Recent economic tendencies.

R. 62.

VII.—One of the following special subjects :—Three papers of 100 marks each.

A.—*Advanced Accounting and Auditing.*

(i) The accounts of different kinds of business including Banks, Insurance Companies, Factories, Mining Companies, Railways, and Hotels, Charitable Institutions, and other non-trading concerns. Partnership accounts, including treatment of goodwill, Income and Expenditure Accounts, Branch Accounts, Cost Accounts, Bankruptcy Accounts, Departmental Accounts, Depreciation, Reserves, Sinking Funds. The Double Account System. Columnar Book-keeping.

(ii) Auditing—The continuous and the completed audit, the detection of fraud, technical errors etc., errors of principle, First and Subsequent Audit; verifying Cash, Securities, Stock Sheets, Wages Sheets. Special considerations in different classes of audit. Valuation of Fixed and Floating Assets. Forms of Accounts and Balance Sheets. Capital and Revenue Items, the Auditor's Certificate; the liabilities of Auditors, the conduct of investigations and the certifying of Average Profits.

B.—*Advanced Banking—*

(i) Principles—

(a) Metallic Currency.—The functions and economic significance of money. Various forms of money. Metallic currencies and coinage. The English Mint regulations and coinage Acts. Currency deterioration—its causes, measures and remedies. Legal tender; the various systems prevailing in different countries. Methods of maintaining internal equivalence of legal tender moneys. Question of monetary standard and valuation. Decimal coinage. Various proposals for international money. Method of measuring variations in the value of money. Indian currency problems.

(b) Banking and the Money Market.—The function and economic significance of Banking. The general structure and methods of English Banking. The Cheque system and the Clearing House. Banking investments. The short loan fund. The Money Market—its fluctuations, periodic and other. The reserve and the discount rate. The regulation of note-issue, and the Bank Acts. £1 notes. Comparison with Foreign systems. Recent developments in English Banking. Indian Banking. General Banking Statistics. The Foreign Exchanges. Financial and commercial crises.

(ii) Banking Law and Practice.

C.—Actuarial Science—

(i) The Binomial and Exponential Theorems ; the theory and use of Logarithms, the elements of the Theory of Probabilities, the elements of the Calculus of Finite Differences including Interpolation and Summation : Elementary Differential and Integral Calculus excluding questions requiring the use of Trigonometry.

(ii) Compound Interest and Annuities-Certain including the construction and use of Relative Tables. Valuation of Perpetuities, Varying Annuities and Increasing Annuities. Capital Redemption Assurances.

(iii) Life Contingencies, including Life Annuities and Assurances and the construction and use of the Life Table, and monetary and other Tables based thereon ; excluding questions on the compilation of Tables from Statistics, or on Graduation.

(iv) The classification of Policies for Valuation, and the preparation of Valuation Class Books.

*D.—The Organization of the Indian Cotton Industry—
Introduction.*

The Botany of cotton.

The History of cotton cultivation and the cotton trade with special reference to India.

The World's production of cotton and India's share in it.

Supply of Raw Cotton.

- (1) Cotton producing areas.
- (2) Organization of cotton cultivation.
- (3) Commercial varieties of cotton.
- (4) Ginning, baling and pressing.
- (5) The marketing and consumption of raw cotton.
- (6) The mechanism of the home and export trade.

Supply of Cotton Yarn.

- (1) Condition of the spinning industry prior to the rise of the factory system, and its development since that time.
- (2) Organization of the spinning industry.
- (3) India's internal and external trade in yarn.

Supply of Cotton Piece-goods.

- (1) Indigenous weaving in India.
- (2) Introduction of factory methods and their development.
- (3) Organization of (a) the manufacture of, (b) the trade in, cotton goods.
- (4) Legislation affecting the cotton industry.
- (5) Life and labour of the cotton operatives.

Labour questions and Social Problems connected with the Cotton Industry.

E.—Economics of Transport.*Road Transport.*

Economics of road construction and maintenance. Theories of fares and rates. Variations caused by types of road transport. Competition. Relation of road to railway transport. Effect of municipal ownership or Local Government financial aid.

Railway Transport.

The nature of the rail-road—capital and expenditure—Gross and net receipts—Economics of railway construction and maintenance—Peculiar conditions in India. Growth of passenger traffic, passenger fares. The Indian passengers and the charges—Influence on the distribution of population. Freight rates and their theory. Rate making in practice. Its defects. Its bearing on Indian conditions.

Influence of production costs on rates. Classification of goods. Special rates. Discriminative charges. Various forms of control. Competition—Effect on rates and fares of State ownership, and State guarantee of interest. The situation in India, influence of railway rates on the distribution of industries.

Inland Water Transport.

Capital expenditure. State aid. Tolls rate. Economics of haulage. Local nature of influence on industry. Policy of Germany and England.

Sea Transport.

Docks and quays. Co-ordination of rail and water-terminal facilities. Port dues. The ship. Economics of marine fuel. Charter party. Bill of lading. Sea-worthiness. Freights on liners and tramps. Agreements to control competition. General navigation laws, and State regulation. Freight making in coastwise transport. Marine insurance. Average. Salvage. The ship canal. The problem before India.

Standard for Passing the Examination.

R. 63. To pass the examination, the candidate must obtain 40 per cent. of the full marks in each subject. Should a candidate, however, fail to obtain 40 per cent. of the full marks, in one subject only, he shall be declared to have passed the examination if, on a review of his marks, a majority of not less than two-thirds of the Examiners present at the final meeting decide that he should pass : Provided always that no candidate shall so pass unless he obtains at least 50 per cent. of the total marks in all subjects. Those of the successful candidates who obtain 60 per cent. of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent. in the Second Class.

R. 64. A candidate who has obtained 50 per cent. of the total marks in any subject at any one examination may, at his option, be excused from

appearing in that subject at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each subject required by Regulation 63. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

CHAPTER VIII.—EXAMINATION FOR THE DEGREE OF MASTER OF COMMERCE

Admission.

O. 210. No candidate shall be admitted to the examination for the Degree of Master of Commerce unless he has passed, not less than two academic years previously, the examination for the Degree of Bachelor of Commerce of this University.

R. 65. (a) The examination for the Degree will comprise two parts :—
Part I—A thesis on a problem relating to Indian Commerce, Finance, or Transport.

Part II—A written examination in four selected subjects.

(b) The Board of Studies may, on the recommendation of the Examiners, exempt a candidate from the whole or a part of the written examination if the thesis submitted by him is of sufficiently high merit.

R. 66. No candidate shall be admitted to Part II until his thesis has been accepted and approved as qualifying under Part I of the examination. This thesis shall be received six months before the date fixed for the examination in Part II. The candidate may take Part II in the same or in a succeeding year. If the thesis is accepted, he may, unless exempted altogether under Regulation 65 (b), appear again and again in Part II until he is declared to have passed on paying a new fee in every examination after the first.

PART I.—THE THESIS.

R. 67. (a) Every candidate for the M. Com. Degree shall submit along with his application three printed or typewritten copies of a thesis on some problem concerning Indian Commerce, Finance, or Transport and shall in footnotes or a preface quote precise references to published works or reports on which he has relied for his facts and figures. He may also submit three printed or typewritten copies of any publications of his on commercial or financial problems.

(b) If the thesis and publications, if any, submitted by the candidate are considered by the Board of Studies, on the recommendation of the Examiners, to be of sufficient merit, the Board shall declare such candidate to have passed in Part I of the examination.

PART II.—WRITTEN EXAMINATION.

R. 68. The written examination shall comprise four papers of three hours each. The candidates may offer any four of the following six subjects on each of which one paper will be set :—

I.—Economics of Agriculture with special reference to India.

II.—The Organization of Industries in India.

- III.—Corporation Finance.
- IV.—The Organization of Markets.
- V.—Foreign Exchanges.
- VI.—International Banking.

Syllabus.

- R. 69.** I.—*Economics of Agriculture with special reference to India.*
- (1) Rural Organization:—A Historical sketch. Leading features of village life in India at present.
 - (2) Organization of agriculture and the scope of co-operation therein :—
 - (a) Irrigation and dry farming, manuring and rotation of crops. Implements, Live stock.
 - (b) Fragmentation of Holdings.
 - (c) Credit and Indebtedness.
 - (d) Marketing.
 - (3) Land Tenures and Assessment.
 - (4) Agricultural Education, Research, Demonstration and Propaganda.
 - (5) Local Boards :—Education, Sanitation and Public Health, Roads.
 - (6) Problems connected with pasture lands and forests.
 - (7) Subsidiary occupations for agriculturists.
- R. 70.** II.—*The organization of the leading industries of India.*
- (1) The basis of modern industry. Resources—natural and human. Capital.
 - (2) Organization of important industries, e.g., Cotton, Jute, Coal, Iron, Sugar, Tea and Leather.
 - (3) The present organization of arts and crafts and the means of strengthening the same.
 - (4) Labour Organization.
 - (5) State in relation to industry.
- R. 71.** III.—*Corporation Finance.*
- The financial needs of modern industries. Need for special organizations. Company promoters. Industrial Banks and Investment Trusts. Underwriting and marketing of industrial securities. Supply of short period capital. Stabilisation of profits and creation of reserves. Integration of businesses and trust finance.
- R. 72.** IV.—*The Organization of Markets.*
- (1) Leading features of modern marketing organization.
 - (a) A detailed study of—
 - Bullion Markets ;
 - Stock Exchanges ;
 - Produce Exchanges ;
 - Yarn Exchanges.

- (b) Various kinds of transactions—
Spot ; Futures ; Call.
- (c) Middlemen and their functions.
- (d) Functions of—
Commission agents,
jobbers,
brokers,
wholesale dealers,
retail dealers.
- (2) Co-operative marketing.
- (3) Speculation : its economic functions and evils.
- (4) The control of speculation by market rules and statutes.
- (5) Trade Commissioners.
- (6) Commercial Organizations and Chambers of Commerce.

R. 73.*V.—Foreign Exchanges.*

- (1) Importance of foreign exchanges in modern economic development. Regulation of exchange rates. Fundamental causes of exchange movements, the purchasing power parity.
- (2) Dealings in bills of various kinds. Investment in exchange. Borrowing by means of exchange. Speculation in exchange.
- (3) Arbitrage. Specie shipments.

R. 74.*VI.—International Banking.*

- (1) Monetary systems of the leading countries.
- (2) Comparative study of the organization of the Central and other banks of India, England, United States of America, Germany, France, Italy, Japan, Canada and Australia.
- (3) Important international money markets and their distinctive features.

*Standard for Passing the Examination.***R. 75.**

No candidate shall be declared to have passed in Part II of the examination unless he has obtained thirty per cent. of the full marks in each of the four papers and forty per cent. of the total marks obtainable.

CHAPTER IX.—BACHELOR OF TEACHING.**THE AFFILIATION OF TRAINING COLLEGES AND SCHOOLS.****O. 211.**

A Training College applying for affiliation to the University shall send a letter of application to the Registrar, and shall satisfy the Syndicate—

- (a) that the College is to be under the management of a regularly constituted governing body ;
- (b) that the qualifications of the teaching staff and the conditions governing their tenure of office are such as to make due provision for the course of instruction to be undertaken by the College ;

- (c) that the buildings in which the College is to be located are suitable ;
- (d) that due provision has been or will be made for a library and equipment for instructional purposes, including arrangements for the practical training in the teaching of Science in the case of institutions applying for permission to train teachers in Science ; and
- (e) that the financial resources of the College are such as to make due provision for its continued maintenance.

O. 212. A School applying for recognition for the purpose of the Degree of Bachelor of Teaching should send a letter of application to the Registrar, and should satisfy the Syndicate—

- (a) that the School shall have on its staff teachers (to be approved by the Syndicate) qualified to give instruction in the Theory and Practice of Teaching ;
- (b) that during the two years immediately preceding the examination teachers under training shall not be required to do in a week more than 15 hours of ordinary school teaching ; and that they shall receive in a week not less than 8 hours' training in the Theory and Practice of Teaching ; and
- (c) that due provision has been or will be made for a library and equipment for instructional purposes, including arrangements for the practical training in the teaching of Science in the case of institutions applying for permission to train teachers in Science.

Admission.

O. 213. A candidate for the Degree of Bachelor of Teaching must be a graduate of the University of Bombay or of a University recognized by the University of Bombay, in any Faculty, and in addition, must, after graduation, have—

- (i) (a) kept two terms (the first and the second) of lectures on the Theory and Practice of Education in a Training College recognized by this University for the purposes of the B. T. Degree ; or
- (b) attended for a period of two years lectures or tutorials on the Theory and Practice of Education given by qualified members of the Staff of a High School recognized by this University for the purposes of the B. T. Degree ;
- (ii) completed a course of Practical work, extending over two school terms to the satisfaction of the Head of the Institution in which the candidate is studying, consisting of—
 - (a) attendance at Demonstration and Discussion Lessons ;
 - (b) observation of Teaching as directed ;
 - (c) Teaching Practice of not less than 30 lessons in a recognized School ;
 - (d) attendance at Tutorials for the discussion of Practical Teaching ; and

- (e) practical experience of Educational Psychology and Experimental Education.

The examination for the Degree of B. T. shall be--

Part I.—Written Examination.

Part II.—Practical Examination.

- O. 214.** The examination for Part I may be taken after two terms' attendance at a recognized Training College or after two years' attendance at a recognized High School as required in Ordinance 213 (i)(a) or (b). Candidates will not be permitted to appear for Part II unless they produce satisfactory certificate that they have served for one full school year on the staff of a recognized High School or a school approved* by the Syndicate, prior or subsequent to passing in Part I.

- O. 215.** A candidate for the Examination in Part I, in Part II or in both must apply to the Registrar by January 31st in each year, with the certificate required by Ordinance 213 (i)(a) or (b), through the head of the institution in which he has received training.

PART I

- R. 76.** In Part I candidates will be examined in the following subjects:—

- (1) A. The Principles of Education (one paper of 100 marks)—

- (a) Philosophical.
- (b) Psychological—Educational Psychology.
- (c) Ethical.
- (d) Social.

- B. The History of Education (one paper of 100 marks).

- (a) History of European Education from Rousseau.
- (b) History of Education in India.
- (c) Main features of the present educational systems of England, Germany, America and Japan.

- (2) A. The Practice of Education (two papers of 100 marks each)—

- (a) School Management and Hygiene.
- (b) General Methods and Class Management.
- (c) Special Methods:—

- 1. Method in English and any *two* of the following:

- 2. (i) Method in History.
- (ii) Method in Geography.
- (iii) Method in Classical Languages.

*The Schools at present approved by the Syndicate are:—A. V. Girls' Middle Schools of Thana, Nasik, Ahmednagar, Bijapur, Dharwar, and the Seva Sadan High School, Poona.

The Camp Education Society's High School, Poona, is provisionally recognized for the purposes of B. T. Degree Examination.

(iv) Method in Modern Languages including the Vernaculars.

(v) Method in Mathematics.

(vi) Method in Science.

B. Educational Experiment (one paper of 100 marks).

(a) Recent developments in Educational Practice.

(b) Tests of Educable Capacity. Elementary treatment only.

R. 77.

The papers set for examination shall be :--

Paper I.—The Principles of Education. } (200 marks).
Paper II.—History of Education.

Paper III.—The Practice of Education—
General Methods, School Management
and Hygiene. } (200 marks).
Paper IV.—The Practice of Education—
Special Methods.

Paper V.—Recent Development in Education } (100 marks.)
—Modern Problems.

Standard for Passing the Examination.

R. 78.

In the Part I Examination, candidates shall be classified as follows :—

Division I.—Those who obtain not less than 66 per cent. of the total number of marks on the whole examination.

Division II.—Those who obtain less than 66 per cent. but not less than 50 per cent. of the total number of marks.

Division III.—Those who obtain less than 50 per cent. but not less than 40 per cent. of the total number of marks.

The total number of marks for the Part I Examination will be 500.

R. 79.

To obtain a pass in Part I, a candidate must satisfy the Examiners in each of the two sub-sections specified under Regulation 76, subject to the following conditions :—

(1) That he obtain not less than 40 per cent. of the total number of marks in each of the two sub-sections, *or*

(2) That a deficiency of one mark in either sub-section shall be condoned for every one per cent. by which the total marks in the whole examination gained by the candidate are in excess of 40 per cent. of the total marks possible.

PART II.

[N. B.—The examination in Part II will also be held according to the old Regulations (*vide* Appendix B) in 1931.]

R. 80.

In Part II of the examination candidates will be tested in their practical skill in class management and class teaching and in their

ability to conduct educational experiments. Candidates will be required to keep—

(1) A 'Diary' of demonstrations attended, lessons observed and teaching practice carried out.

(2) A 'Journal' containing notes of lessons given and criticisms made thereon by a Master of Method.

(3) A 'Log-book' of experimental work carried out.

The Head of the Institution in which the candidate is studying will be required to keep—

(1) A record and estimate of all lessons given by students in the Practising School ;

(2) A record and estimate of all experimental work done.

Standard for Passing the Examination.

R. 81. In Part II Examination, candidates shall be classified into Groups as follows :—

Group I.—Those who obtain not less than 66 per cent. of the total number of marks in the practical examination.

Group II.—Those who obtain less than 66 per cent. but not less than 50 per cent. of the total number of marks.

Group III.—Those who obtain less than 50 per cent. but not less than 40 per cent. of the total number of marks.

The total number of marks for the Part II Examination will be 500.

R. 82. (1) Marks up to a maximum of 150 shall be assigned by the Examiners for work done during the year, on the strength of the report of the Head of the Institution in which the candidate has been studying and on the inspection of the candidate's journals.

The journals shall be produced at the time of the examination.

(2) For the remaining marks a candidate must submit to a practical test of two full period lessons. The subjects of these lessons will be two, selected by the candidate, out of the three offered for Part I under Regulation 76(2)A(c).

R. 83. (a) Candidates who are placed in Division I and Group I shall be declared to have obtained a First Class on the whole examination.

(b) Candidates who are placed in or above Division II and in or above Group II, excluding those who are placed in the First Class under clause (a), shall be declared to have obtained a Second Class on the whole examination.

(c) Candidates who are placed in or above Division III and in or above Group III, excluding those placed in the First and Second Classes shall be declared to have obtained a Pass on the whole examination.

(d) Candidates who obtain a First Class and who present a thesis or the results of an investigation judged by the Examiners to be of special merit may be declared to have obtained First Class (with Distinction).

BACHELOR OF SCIENCE.

GENERAL.

- O. 216.** Candidates for the Degree of Bachelor of Science must have passed the Matriculation Examination, and will be required to pass two subsequent examinations, the first to be called the Intermediate Examination in Science and the second the Examination for the Degree of Bachelor of Science.

[N. B.—A Bachelor of Arts who has taken either of the Optional Science groups shall be allowed to appear in any Science group in the B.Sc. Examination, provided he has kept four terms at a College or Institution recognized in Science, subsequent to his passing the B.A. Examination. Further, a Bachelor of Arts shall be allowed to appear for the B.Sc. Examination in the optional group in which he has passed the B.A. Examination (*i.e.* either Physics and Chemistry or Botany and Zoology) after he has kept, subsequent to his passing the B.A. Examination, two terms at a College or Institution recognized in Science.]

CHAPTER X.—INTERMEDIATE EXAMINATION IN SCIENCE.

Admission.

- O. 217.** No candidate will be admitted to this examination, unless he shall have, after obtaining a certificate from the Principal of an Arts College showing that he has satisfactorily carried out the work appointed by the University for the first two terms in Arts, kept two terms at a College or Institution recognized for the purposes of the Intermediate Examination in Science by the University of Bombay, and unless he produces satisfactory testimonials in the prescribed form.

- O. 218.** Candidates must forward their applications to the Registrar on or before the 20th February with certificates of attendance during the first term. Certificates of attendance during the second term should be forwarded by Principals of Colleges on or before the 10th March.

- O. 219.** Candidates will be examined in one of the following groups of subjects :—

- (A) Mathematics, Physics and Chemistry ;
- (B) Physics, Chemistry and Elementary Biology.

- O. 220.** (a) Candidates who have passed the examination in the A Group will be permitted, on the submission of a new application and the payment of a fresh fee, to appear again at the examination in the B Group and *vice versa* with exemption at their option from the subjects of Physics and Chemistry, provided they attend lectures (and laboratory work) in the third subject for a period of two terms at a College affiliated for this examination.

(b) The exemption referred to in (a) shall also apply to candidates who have passed in either of these groups at the Intermediate Examination in Science of any of the Universities, the Intermediate Examination in Science of which is recognised as equivalent to the Intermediate Science Examination of this University.

- O. 221.** Candidates who have passed the B.Ag. Examination will be allowed to appear at this examination in group (B) without attendance at a College and will at their option be exempted from undergoing an examination in Chemistry and Elementary Biology in that group.

Candidates so exempted shall not be eligible for a class or for University awards.

R. 84. There shall be two papers in Mathematics of 100 marks each and one paper and one practical examination of 100 marks each in all the other subjects.

R. 85. On the recommendation of the Boards of Studies, the Academic Council may from time to time prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 86. I.—MATHEMATICS—(Two Papers).

(As at the Intermediate Examination in Arts, *vide* page 136.)

R. 87. II.—PHYSICS.

(One Paper and one Practical Examination of three hours each.)

Candidates shall be examined in the following branches of the subject in accordance with details which shall be specified by the Academic Council, on the recommendation of the Board of Studies, from time to time :—

General Physics : Mechanics (Kinematics and Kinetics), Statics, Hydrostatics, Properties of Matter.

Heat : Temperature, Quantity of heat, Transference of heat, First law of Thermodynamics.

Sound.

Light : Geometrical Optics.

Magnetism and Electricity : Magnetism, Statical and Current Electricity, Electromagnetism.

DETAILS :—

General Physics.

Introductory.—Matter and energy. Physical magnitudes, fundamental and derived units, dimensions, units of l, m and t ; unit of angular measure. Measurement of length, vernier, micrometer screw, screw-gauge, cathetometer. Measurement of volumes, surfaces.

Kinematics.—Material particle, vectors and scalars, motion. Velocity, uniform and variable, graphical representation. Composition and resolution of velocities and accelerations. Hodograph, motion in a circle. Periodic motion. Simple harmonic motion, velocity and acceleration of a S. H. M., Graphical representation and composition of S.H.M's.

Dynamics.—Newton's laws of motion, force, graphical representation, composition and resolution of forces acting at a point. Moment of a force, parallel forces, couples. Equilibrium of forces. Definition of work. Graphical representation, power, energy, kinetic and potential. Principle of the conservation of energy. Simple machines, the inclined plane, the screw, the balance. Statical friction. Limiting

angle. Angle of repose. Centre of gravity; stable, unstable and neutral equilibrium. Laws of oscillation of a simple pendulum. Pendulum as a measure of time.

Properties of matter.—General properties and states of matter. Pressure exerted by a fluid. Principle of Archimedes. Density and elasticity of gases (omitting Regnault's work). Air manometer, barometer. Mechanical air pump. Equilibrium of a liquid at rest, density of a liquid. Hydraulic press, pumps, syphon. Capillarity and surface tension phenomena, angle of contact. Properties of solids. Malleability, ductility, hardness, density, elasticity of volume, elasticity of shape, elongation, Hook's law, Young's modulus.

Heat.

Temperature. Thermometric scales. Thermometer. Fixed points. Errors in mercury thermometers. Maximum and minimum thermometers. Linear expansion. Coefficient of linear expansion (first portion). Cubical expansion of solids. Expansion of non-isotropic bodies. Coefficient of expansion of fluids. Apparent expansion. Absolute expansion, Density of water at different temperatures, maximum density. Expansion of gases. Expansion of a gas at constant pressure. Increase of pressure of a gas at constant volume. Charles' Law. Absolute zero.

Quantity of heat. Specific heat of solids (omitting radiation correction). Specific heat of liquids.

Change of state. Melting point. Change in volume during fusion. Latent heat of fusion. Boiling point. Latent heat of vaporisation. Vapour pressure. Humidity—hygrometric state. Hygrometry. Conduction of heat. Transference of heat. Conduction. Measurement of conductivity (omitting Lee's method); Prevost's theory of exchanges. Instruments for measuring radiant heat.

Mechanical theory of heat. Theories as to the nature of heat. Dynamical equivalent of heat. Joule's determination.

Sound.

Wave-motion, velocity of propagation. Wave-front. Ray. Production, propagation and measurement of sound. Quality of sound. Pitch of a note. Diatonic scale and simple interval. Reflection and refraction of sound. Theory and use of the sonometer. Resonators. Kundt's experiments. Audition. Human ear. Beats. Structure and function of the ear and throat.

Light.

Rectilinear propagation of light. Shadows. Pin-hole camera. The nature of light. Curvature of a surface. Images. Laws of reflection. Rotation of a plane mirror. Use of mirror and scale. Reflection in spherical mirrors. Image of a small object on the axis of a mirror. Refraction—Snell's Law. Refraction through a slab. Image of a point formed by refraction, a plain surface. Total internal reflection. Refraction through a prism. Refractive index from angle of minimum deviation. Lenses. Relative positions and size of image and object. The eye. Defects of vision. Simple microscope. Telescope. Illuminating power. Law of inverse squares. Unit of

illuminating power. Photometry. Dispersion. Fraunhofer Lines. Achromatic prisms and direct vision spectroscope.

Magnetism and Electricity.

Natural and artificial magnets. Magnetic attraction and repulsion. Permanent and temporary magnetism. Magnetic lines of force. Fields of magnetic force. Molecular magnets. Coulomb's law. The unit magnetic pole. Magnetic moment. Strength of magnetic field. Couple acting on a magnet in a magnetic field. Couple due to the action of one magnet on another.

The magnetic elements. Measurement of the declination. Determination of the dip. Measurement of the horizontal force. Terrestrial magnetic lines. Continuous magnetic records. Diurnal range. Annual and secular changes. Magnetic storms.

Electrostatics.—Electrification by friction. Conductors and non-conductors. Two kinds of electrification. The gold leaf electroscope. Electrification by induction. Coulomb's law.

Electrical lines of force. Faraday's ice-pail experiment. Difference of potential. Equipotential surfaces. Electrification confined to the surface of a conductor. Force exerted on a charged body placed inside a hollow charged conductor.

Capacity of a conductor. Condensers.

The friction machine. The electrophorus. The water dropper. The Wimshurst machine.

The electric current.—The electric current. The E.M.F. Oersted's experiment. Lines of force of a conductor conveying a current. Electromagnetic unit of current. Units of quantity and of E.M.F. on the electromagnetic system. Field due to a circular conductor. Galvanometer. The tangent galvanometer (measurement of H).

Ohm's law. Specific resistance. Standards of resistance. Resistance of systems of conductors. Shunts. Wheatstone's network of conductors. Wheatstone's bridge. Fall of potential along a wire in which a current is passing.

Joule's law. The mechanical equivalent of heat derived from electrical experiments.

Force acting on a straight conductor conveying a current when placed in a magnetic field. Force acting on a rectangular coil conveying a current when in a magnetic field.

Induced currents. Lenz's law. Electromagnetic induction. Magnitude of the induced E.M.F. The earth inductor.

Electrolysis.—Faraday's law. Electrolytic dissociation.

Practical Work.

(a) Every candidate shall complete a course of laboratory work of not less than 25 experiments as detailed by the Academic Council on the recommendation of the Board of Studies. Each candidate shall produce a certificate from the Head of the Department that he has completed in a satisfactory manner at least the prescribed number of exercises. Every candidate must record his observations directly in his laboratory journal and write therein a report of each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff and certified at the end of the year.

Practical Course.

(b) The Course of practical Physics will be same as that for the B. A. Pass Examination (*vide* p. 151). Candidates may be examined on any of the experiments marked (*) or on any other experiments done by him in the laboratory as shown in the journal. The journal shall be produced at the examination.

R. 88.

III.—CHEMISTRY.

(One Paper and a Practical Examination of not more than six hours.)

Inorganic Chemistry.

Organic Chemistry.

Practical Chemistry.

Details of the syllabus will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

Inorganic Chemistry.

The character of physical and chemical changes including solutions, distillation, crystallization, dissociation, combustion, precipitation, neutralization, electrolysis, the conditions which influence and determine them and the attendant phenomena. Catalysis.

Acids and bases.

Oxides, their formation and classification.

The formation and decomposition of salts.

Oxidation and reduction.

The general laws of gases. Avogadro's hypothesis. Molecular weights. Experimental determination of the density of gases and of vapours. Atomic hypothesis. Experimental determination of atomic weights. Symbols, formulæ, equations and chemical calculations. The simple gas equation.

Gas mixtures. Diffusion. Osmotic pressure.

Mass action.

The atmosphere.

Oxygen and ozone : preparation and properties.

Hydrogen : preparation and properties.

Water : natural waters, temporary and permanent hardness, methods of softening on a large scale, water of crystallization, efflorescence, deliquescence. Hydrogen peroxide.

Carbon : varieties of carbon; carbon dioxide, the carbonates; carbon monoxide, producer gas, water gas. Chemistry of flame and coal gas.

Silicon : silica and silicates ; bricks, glass, pottery.

Nitrogen : ammonia, oxides of nitrogen, nitrous acid and the nitrites ; nitric acid and the nitrates.

Chlorine, bromine, and iodine : hydrochloric acid and the chlorides, bleaching powder and bleaching solution. Potassium chlorate. Hydrobromic and hydriodic acids. The family of the halogen elements including fluorine.

Sulphur : Sulphur dioxide and sulphur trioxide. Sulphuric acid and the sulphates. Sulphuretted hydrogen and the sulphides. Carbon disulphide. The oxygen-sulphur family.

Phosphorus: Phosphorus pentoxide, phosphoric acid and the phosphates, phosphine; arsenic, antimony, and bismuth and their compounds including arsenious oxide and arsenious acid, arsenic trichloride, arsenic oxide, arsenic acid, realgar, orpiment, arsine; antimony trioxide, trichloride and pentachloride, trisulphide and pentasulphide, stibine; bismuth trioxide, chloride and oxychloride, nitrate and oxynitrate; the nitrogen-phosphorus family.

Silver and copper and their compounds including silver nitrate, oxide, hydroxide, chloride, bromide, and iodide; cupric sulphate, nitrate, chloride, oxide, hydroxide, sulphide; cuprous chloride, oxide, sulphide; basic carbonates of copper.

Mercury and zinc and their compounds including mercuric sulphate, chloride, nitrate, oxide, hydroxide, sulphide; mercurous nitrate, chloride; zinc sulphate, hydroxide, oxide, chloride, sulphide, carbonate.

Borax and boric acid. Aluminium and its compounds including aluminium sulphate and the alums, aluminium oxide, hydroxide, sodium aluminate. China clay; the action of aluminium on certain metallic oxides (Goldschmidt's process).

Tin and lead and their compounds including stannic chloride, sulphide, oxide; stannic and metastannic acids; stannous chloride, sulphide; lead nitrate, acetate, hydroxide, oxides, sulphide; red lead and white lead.

The rusting of tin plate and of galvanized iron.

The carbon-silicon-tin-lead family.

Chromium: chromates and dichromates, chromium trioxide, chromic oxide and salts.

Manganese: oxides and salts of manganese; manganates and permanganates.

Iron: cast iron, steel and wrought iron. Oxides of iron. Ferric chloride, hydroxide, ferrous sulphate, chloride, hydroxide.

Magnesium: magnesium sulphate, oxide and carbonate.

The compounds of calcium and barium, including calcium sulphate, phosphate, chloride, hydroxide, oxide, carbonate, and carbide; barium carbonate, chloride, sulphate, hydroxide, and oxides.

Sodium and potassium and their compounds, including sodium chloride, sulphate, sulphide, carbonates, hydroxide, nitrate; potassium chloride, sulphate, carbonates, hydroxide, nitrate, chlorate.

Ammonium salts, including ammonium sulphate, nitrate, chloride, carbonates, hydroxide, and sulphide.

Organic Chemistry.

Purification of organic substances. The detection of carbon, hydrogen, the halogens, nitrogen and sulphur. Ultimate analysis.

The principles of organic chemistry, illustrated by the study of the following substances:—

Methane, ethane, ethylene, acetylene, benzene and toluene.

Methyl and ethyl alcohols; ether; ethyl Hydrogen sulphate.

Ethyl chloride and iodide. Chloroform and iodoform.

Formaldehyde, acetaldehyde, chloral and acetone.

Formic and acetic acids ; ethyl acetate ; acetyl chloride ; chloroacetic acid. Acetamide ; aminoacetic acid. Urea.

Hydrocyanic acid ; cyanogen.

Oxalic acid ; lactic acid ; tartaric acid.

Glycerol and glycerides ; soaps.

Cellulose ; starch, cane sugar ; fructose ; glucose.

Nitrobenzene, aniline and phenol.

Benzyl chloride and alcohol ; benzal chloride and benzaldehyde ; benzotrichloride and benzoic acid. Salicylic acid.

Practical Examination.

Each candidate must produce a certificate from the Head of the Chemistry Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination. Each candidate is required to perform satisfactorily some portion at least of each of the exercises and is to be prepared to satisfy any tests demanded by the Examiners within the standard and scope of the syllabus prescribed. Experiments and observations should be made quantitative as far as possible, and some knowledge be obtained as to the extent of the error incidental to each.

Course of Practical Work at present prescribed.

PART I.

(a) (1) The cutting and bending of glass tubing. The preparation of simple apparatus involving the use of corks and tubes, e. g., gas generating tubes and flasks, wash bottles.

(2) Purification of liquids, e.g., water, by distillation ; purification of salt, by crystallization.

(3) Solubility of common salt or a similar substance in water. Determination of a solubility curve for a salt such as potassium chlorate.

(4) Observation of the effect of heating sulphur, carbon, magnesium, iron, zinc, copper, aluminium, lead or other substances in air.

(5) Determination of the change in weight on heating a known weight of magnesium or other substance in air.

(6) Decomposition of salts on heating ; the qualitative and quantitative results of heating such substances as lead nitrate, slacked lime, red lead.

(7) Preparation of oxygen on a small scale ; properties of the gas.

(8) Determination of the percentage weight of oxygen given off on heating potassium chlorate and the calculation of the molecular weight of oxygen from the volume of oxygen collected.

(9) Preparation on a small scale of gases, such as carbon dioxide, chlorine, nitric oxide, sulphur dioxide; properties of these gases.

(10) Determination of the volume of hydrogen evolved when equal weights of different metals are dissolved in hydrochloric acid, and the equivalent weights of metals, such as magnesium, zinc, aluminium.

(11) Oxidation and reduction: action of potassium chlorate, potassium nitrate, potassium permanganate solution, chlorine water, and other similar agents.

(12) The effect of heating metallic oxides with carbon.

(13) The action of reducing agents such as stannous chloride solution or zinc and sulphuric acid.

(14) The use of standard and normal solutions as in simple acidimetry and alkalimetry determinations. Simple determination by oxidation.

PART II.

(b) (1) Neutralisation and salt formation; preparation of sodium chloride, potassium sulphate, potassium nitrate; preparation of barium sulphate, lead chromate, zinc sulphide by precipitation; preparation of lead nitrate from litharge; zinc sulphate from zinc; magnesium sulphate from magnesium carbonate. Preparation of other salts obtained by similar methods. Quantities of material and yield to be measured.

(2) Candidates will be expected to detect the presence of any of the following elements and radicals:—Hydrogen, Potassium, Sodium, Ammonium, Barium, Calcium, Magnesium, Zinc, Iron, Aluminium, Manganese, Chromium, Silver, Lead, Mercury, Copper, Bismuth, Arsenic, Antimony, Tin, in the form of Oxide, Hydroxide (water excepted), Sulphide, Sulphate, Carbonate. Phosphate, Chromate, Chloride, Bromide, Iodide, Nitrate, in powders soluble in water or hydrochloric acid or solutions containing not more than one base and one acid in each. Both dry and wet methods should be used and confirmatory tests should be made. Candidates may be required to make preparations from the substances given for analysis.

(3) Candidates may or may not be allowed to use their laboratory note-books, during the practical examination at the discretion of the Examiners.

R. 89.

IV.—ELEMENTARY BIOLOGY.

(One Paper and a Practical Examination of four hours.)

Details of the Syllabus will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

General Biology.—

The distinctive properties of living and non-living bodies.

Distinction between animals and plants.

The distinctive properties of protoplasm.

The cell, its structure, contents and its method of division.

An elementary knowledge of evolution.

A.—Plants—

1. The plant body, its parts, their forms and arrangement.
2. The internal structure of plants.
3. The functions of plant parts and tissues.
4. The principal divisions of the plant kingdom.

The above points are to be studied in an elementary manner from common plants and in addition the following types are to receive special attention—

Bacillus, Yeast, Mucor, Spirogyra, Nephrolepis, Cycas, Maize, Bean, Nymphaea.

B.—Animals.—**Histology.—**

The different kinds of animal tissues: Blood, epithelia, connective tissue, cartilage, bone, muscles and nerves.

Physiology.—

Irritability, respiration, secretion, excretion, circulation of blood and metabolism (treated in an elementary way).

Development.—

Elements of reproduction, sexual and asexual; embryology of the frog's egg up to the formation of the germinal layers.

Candidates will be required to show a practical knowledge of the structures, functions and life-history of—

Amoeba, Paramoecium, Hydra, Pheretima, Panulirus, Mosquito (external morphology only), Periplaneta and Rana.

Practical Examination.

(a) Every candidate shall complete a laboratory course in accordance with the Regulations issued from time to time by the Academic Council on the recommendation of the Board of Studies. Each candidate shall produce a certificate from the Principal of his College that he has completed in a satisfactory manner the prescribed course. Every candidate must record his observations directly in his laboratory journal. Every journal is to be signed periodically by a member of the laboratory staff and certified by him at the end of the year. Candidates are to produce their journals at the practical examination and such journals may be taken into account by the Examiners in assigning marks.

Practical work.

(b) (1) The recognition, dissection, examination and description of the above-mentioned animals and plants and parts of them.

(2) The use of the microscope in examining the structure of animals and plants. The preparation of the above-mentioned animals and plants and parts of them for the microscope.

Standard for Passing the Examination.**R. 90.**

To pass the examination, a candidate must obtain thirty-three per cent. (33%) of the full marks in each paper and in each practical examination. In Mathematics, a candidate must obtain thirty-three per cent. of the total marks. Should a candidate, however, not obtain thirty-three per cent. of the full marks in one paper or practical

examination *only*, or in Mathematics *only*, he may be declared, by a majority of not less than two-thirds of the Examiners present at the final meeting, to have passed the examination, provided he obtains at least forty per cent. of the total marks in all subjects taken together. Those of the successful candidates who obtain sixty per cent. of the total marks obtainable will be placed in the First Class, and those obtaining forty-eight per cent. in the Second Class.

- R. 91.** A candidate who has obtained forty-four per cent. of the total marks in any subject (including the practical) at an examination may, at his option, be excused from appearing in that subject (provided he has obtained the minimum in each paper and practical of that subject required by Regulation 90) at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination: Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper or subject or practical required by Regulation 90. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

CHAPTER XI.—EXAMINATION FOR THE DEGREE OF B.Sc.

Admission.

- O. 222.** No candidate will be admitted to this examination unless he shall have, after passing the Intermediate Examination in Science, kept four terms at a College or Institution recognized for the purposes of the examination for the Degree of Bachelor of Science by the University of Bombay, and unless he produces satisfactory testimonials in the prescribed form.

[N. B. (1)—The terms referred to in these Ordinances are terms of the Science Faculty unless otherwise specified; and two such terms and three terms of the Medical Faculty are to be deemed to be equivalent to one another.

(2).—Bachelors of Agriculture who are exempted from undergoing an examination in Chemistry and Elementary Biology at the Intermediate Examination in Science under Ordinance 221 will be permitted to keep terms for the B. Sc. Examination before passing the Intermediate Examination in Science, provided that the terms so kept will be regarded as terms for the B. Sc. Examination, only when the candidates have passed the Intermediate Examination in Science.]

- O. 223.** A student who has passed in all subjects but one at the Intermediate Science Examination in conformity with Regulation 91 will be allowed to keep terms and appear for the B. Sc. Examination, after keeping four terms, (except when the candidate's subject for B.Sc. is either Human Anatomy and Embryology or Animal Physiology in which case he must have passed the Inter. Science Examination), but will not be declared to have passed the B. Sc. Examination under any circumstances, unless he has passed in the remaining subject of the Intermediate Science Examination held either in a previous, or in the same examination, season.

- O. 224.** A candidate may appear in his Subsidiary subject only after two terms if he chooses, and if he passes in it, he may appear for the Principal subject only after keeping two more terms.

- O. 225.** Candidates must forward their applications to the Registrar on or before the 20th February with certificates of attendance during the

first three terms. Certificates of attendance during the fourth term should be forwarded by the Principals of Colleges on or before the 10th March. Applications for admission to the October Examination in the Subsidiary subjects should reach the Registrar not later than the 1st of September.

O. 226. A candidate who has passed the examination will be permitted, on the submission of a new application and the payment of a fresh fee, to appear again at the examination in a Principal subject other than the one in which he has already passed, provided he has completed the minimum attendance in an affiliated College at a course of instruction in the subject in which he has to appear during two additional terms. A candidate appearing again at the examination under this Ordinance will, on passing in an additional Principal subject, be awarded a certificate to that effect.

R. 92. (a) Candidates must select any two of the following subjects, one of them being the Principal subject and the other Subsidiary one. Students selecting the subjects of Physics and Chemistry must take a course of the Calculus.

- | | |
|------------------|-----------------------------------|
| (1) Mathematics. | (6) Geology. |
| (2) Physics. | (7) Microbiology. |
| (3) Chemistry. | (8) Animal Physiology. |
| (4) Botany. | (9) Human Anatomy and Embryology. |
| (5) Zoology. | (10) Experimental Psychology. |

(b) On the recommendation of the Boards of Studies, the Academic Council may from time to time prescribe or recommend text-books in various subjects of the examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for the examination.

R. 93. (a) There shall be 600 marks for a Principal subject, each paper and each practical examination to carry 75 marks when there are four papers and four practical examinations or eight papers, and each paper and each practical examination to carry 100 marks when there are three papers and three practical examinations.

(b) There shall be 300 marks for a Subsidiary subject, each paper or practical examination carrying 75 marks.

Syllabus.

R. 94.

(1).—MATHEMATICS.

As a Subsidiary Subject.

(Four Papers of three hours each.)

Paper I.

Analytical Geometry.—Properties of ellipse, parabola, hyperbola when referred to rectangular or polar co-ordinates, reduction and tracing of curves given by the general equation of the second degree.

Solid Geometry.—The straight line, plane, sphere, ellipsoid and transformation of axes.

Papers II and III.

Differential and Integral Calculus and Differential Equations.—The course will be as defined for the B. A. Pass Course examination (page 142) and shall include in addition De Moivre's Theorem, hyperbolic functions, double integration, moments of inertia, Fourier's series without proof, simultaneous differential equations of the first order and elementary ideas on partial differential equations, and the examples set for solution shall be of a simple type.

Paper IV.

Statics and Dynamics (Analytical) of two dimensions. Examples set for solution will be of a comparatively simpler type.

As a Principal Subject.

The examination will be identical with that for B. A. Honours Examination in Mathematics (pp. 143-144) and the total marks in each paper will be proportionately reduced, *i.e.*, each paper will carry twelve-seventeenths of the marks assigned to it at the B. A. Examination.

R. 95.

(2).—PHYSICS.

As a Subsidiary Subject.

(Two Papers and two Practical Examinations of not more than three hours each.)

The Course and Syllabus are identical with those for the B. A. Honours Examination (*vide* pp. 147-153).

As a Principal Subject.

(Four papers and four practical examinations of not more than three hours each.)

Candidates will be examined in the following branches of the subject in accordance with details which shall be specified by the Academic Council on the recommendation of the Board of Studies from time to time:—

Course prescribed:—

General Physics: Mechanics, Hydrostatics, Hydrodynamics, Properties of Matter.

Heat: Kinetic Theory, Change of State. Transference of Heat. Thermodynamics.

Light: Geometrical and Physical Optics, Relativity.

Sound: Mathematical Theory, Physical Applications.

Electricity and Magnetism: Magnetism, Electrostatics, Electromagnetism, Alternating Current, Units and Dimensions, Conduction in cases, Radioactivity, Electron Theory.

The papers will be constituted as follows:—

Paper 1.—Properties of Matter and Molecular Physics.

Paper 2.—Heat and Sound.

Paper 3.—Light and Radioactivity.

Paper 4.—Electricity and Magnetism including Electron Theory,

General Physics.

Fundamental units of measurement. Force, torque, work, energy, stable and unstable equilibrium.

Rotational motion.—Rotating bodies. Moment of inertia and moment of momentum. Elementary gyrostat.

Simple harmonic motion.—Simple and compound pendulums. Bifilar suspension. Maxwell's needle. Theory of the balance.

Theory of oscillations.—Corrections to observations on pendulums due to various causes. Coupled systems. Damped oscillations, forced oscillations.

Gravitation.—Newton's law. Gravitational potential. Determination of the constant of gravitation.

Elasticity.—The different moduli of elasticity and the relations between them. Bending. Torsion. Deformation of the cross section due to bending.

Bulk-moduli of solids and liquids. Tensile strength of liquids.

Surface tension.—Pressure due to different curvatures of liquid surfaces. Stability of films. Ripples on the surface of a liquid.

Linear and rotational motion of a fluid omitting the theory of vortices. Laws of transfer of energy and momentum by the steady motion of a fluid. Attraction of two sources or two sinks.

Waves on the surface of a liquid.—Energy of waves. Deep water and shallow water waves.

Flows of a viscous fluid.—Viscosity, lubrication. Viscosity of gases.

The molecular structure of fluids.—Kinetic theory of gases, Van der Waal's theory. Viscosity, thermal transpiration, osmotic pressure. Application to solutions.

Heat.

Kinetic theory of matter.—Kinetic theory of gases. Mean square velocity. Mixture of gases. Internal energy and energy of translation. Joule's method of calculating R. M. S. Effusion through an orifice. Thermal transpiration. Mean free path. Molecular dimensions. Dependence of M. F. P. on molecular dimensions and on the density. Calculation of M. F. P. from the viscosity. Conduction of heat in gases. Diameter of molecules. Forces on unequally heated surface in high vacua. Vander Waal's equation.

Change of state.—Gas and vapour. Condensation of nuclei. Measurement of a vapour density and vapour pressure. Latent heat. Specific heat of saturated steam. Indicator diagrams. Critical point. Reduced isothermals. Liquefaction of gases. Melting from point of view of kinetic theory.

Radiation.—Radiant energy, Bolometer. Emissive power. Radiation of different wave lengths. Comparison of absorptive powers of reflecting powers. Theory of exchange. Uniform temperature enclosures. Effect of the medium on radiation. Bodies exchanging

radiations at different temperatures. Radiations and temperature. Newton's law. Dulong and Petit's law. Stefan's law. Constants of radiation. Solar constant.

Thermodynamics.—Isothermal and adiabatic changes. Thermodynamics of change of state. Thermodynamics of radiation.

Light.

Geometrical optics.—Fundamental ideas. Theory of spherical mirrors and lenses. Thick lenses and systems of lenses. Defects of the image. Chromatic aberration.

Physical optics.—Interference. Diffraction. Polarisation and double refraction.

Optical rotation and the analysis of polarised light.

Spectroscopy, the ultra-violet, the infra-red and X-rays.

The electromagnetic theory of light. (Treatment according to Starling's 'Electricity' sufficient.)

The relative motion of matter and ether.

Electricity and Magnetism.

Magnetism.—The same as for the Subsidiary B.Sc., but more in detail.

The electric current.—The same as for the Subsidiary but more in detail.

Galvanometers:—Kelvin's astatic needle galvanometer, the suspended coil galvanometer, Duddell's thermo-galvanometers. Sensitiveness of a galvanometer.

Electrostatics.—Chapter V. Starling's 'Electricity' sufficient.

Electrolysis.

Thermo-electricity.

Electro-magnetics.

Magnetic properties of materials.—Theories of magnetisation. Induction within a magnetic material. Demagnetisation, practical methods. Cycle by ballistic method. Cycle of magnetisation—hysteresis. Iron and steel. Work due to hysteresis. Steinmetz law. Iron and steel alloys. Magnetic alloys of non-magnetic substances. Magnetic curve tracer. Weak magnetic fields. Time lag. Very strong fields. Variation of temperature. Mechanical stress. Molecular theory. The magnetic circuit.

Varying current.—Inductance. Growth of current. Decay of current. Inductance of a solenoid. Co-axial cylinders. Practical unit of inductance. Charge and discharge of a condenser. Measurement of high resistance by leakage. Mutual inductance. Calculation of mutual inductance. Current in secondary. Charge flowing in secondary circuit. Divided circuit. The induction coil. Circuit with inductance capacity and resistance (charge, frequency of oscillation, limiting, case, discharge, limiting conditions, rate of discharge, discharge examined by rotating mirrors).

Alternating currents.—Circuit with inductance and resistance. Vector diagram. Impedance and reactance. Measuring instruments. Virtual current and E. M. F. Measurement of inductance. Power in alternating current circuit. Power factor. Wattmeters. Circuit containing capacity, inductance and resistance. Choking coil. Duddell oscillograph. Rotating magnetic field. Singlephase motor. Imaginary quantities. Rotating vector. Application of imaginaries to circuit having inductance, capacity and resistance.

Units and Dimensions.—Electrical units. Electromagnetic system of units. Electrostatic system of units. Relation between units of the two systems. Determination of the Ohm (Rotating coil method, method of Lorentz).

Electromagnetic radiation.—Fundamental equations. Maxwell's displacement current. Propagation of a plane wave. Magnetic field and motion of Faraday tubes. Plane wave as a motion of Faraday tubes. Energy of wave. Poynting's theorem. Pressure on surface due to incident wave. Index of refraction of light.

Conduction in gases.

Radio-activity.

Electron theory.

Sound.

Wave-motion, transverse and longitudinal. Elastic vibrations. Composition of simple harmonic motions. Fourier's theorem.

Stationary waves.

Damped and undamped oscillations, forced oscillations, beats.

Reflection of sound.

Sound, its production, propagation and velocity.

Musical scale. Tonometry. Stroboscope.

Practical work.

(a) Each candidate shall complete a course of laboratory work consisting of not less than 25 experiments of the Subsidiary standard as given above (pp. 147-153) and of not less than 25 experiments of the Principal standard as detailed by the Academic Council on the recommendation of the Board of Studies and given below. Each candidate shall produce a certificate from the head of the Department that he has completed in a satisfactory manner at least the prescribed number of experiments. Every candidate must record his observations directly in his laboratory journal and write therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff and certified at the end of the year. Candidates may be examined on any of the typical experiments given below or on any other experiments done by him in the laboratory as shown in the journal. The journal shall be produced at the examination.

Practical Course.

- (b) The following are typical experiments :—
1. The balance : ratio of the arms, various methods of weighing, corrections, calibration of a set of weights.
 2. Measurement of the period of an oscillating body. Comparison of movements of inertia. Logarithmic decrement.
 3. Determination of Young's modulus and rigidity of wire by Searle's method.
 4. Use of cathetometer for determining Young's modulus.
 5. Maxwell's needle.
 6. Determination of n and Y from experiments with a flat spiral spring.
 7. Surface tension of a drop of a liquid.
 8. Coefficient of viscosity of a fluid with corrections. Method : flow through a tube, oscillating disc.
 9. Correction of thermometer reading for emergent column.
 10. Cubical expansion.
 11. Thermal expansion of gases.
 12. Measurement of the heat of solution.
 13. Measurement of vapour density by Hofmann's method.
 14. Sonometer.
 15. ρ by total reflection.
 16. Calibration of a spectroscope, using the dark lines in the solar spectrum.
 17. Wave length by biprism.
 18. „ „ diffraction.
 19. „ „ Newton's rings.
 20. Resolving power of a grating.
 21. Focal length and positions of principal planes of a thick lens.
 22. To test the flatness of the faces of a piece of glass.
 23. Analysis of an elliptical vibration.
 24. The spectrophotometer.
 25. Measurement of the absorption curve of a solution.
 26. Figure of merit of a galvanometer.
 27. Calibration of a metre-bridge.
 28. Comparison of capacities.
 29. Measurement of E. M. F. of a thermo-couple.
 30. Measurement of magnetic induction (Earth inductor and ballistic galv.).

31. Hysteresis loop (magnetometer method).
32. Measurements of inductances. Mutual inductances. Self-inductances.

Candidates may be asked during the examination to perform any of the experiments mentioned in the above list or any other, provided that the exercise does not involve any new mode of measurement with which the candidate is not expected to be familiar, and that the same can be completed in three hours.

R. 96.

(3).—CHEMISTRY.

As a Subsidiary Subject.

(Two Papers and two days' Practical Examination.)

The Course and Syllabus are identical with those for the B. A. Honours Examination (*vide* pp. 153–155).

As a Principal Subject.

(Four Papers and at least three days' Practical Examination.)

Candidates for the B. Sc. Degree Examination, with Chemistry as Principal subject, are expected to be acquainted with the main landmarks in the historical development of Chemistry, and with the contributions of workers of outstanding importance towards this development.

Paper I.—Inorganic Chemistry.

The subject as for the B. Sc. (Subsidiary) Examination, treated in a more advanced manner, including the consideration of all elements and their compounds not then considered.

General acquaintance with the technical methods employed in preparing the elements and their compounds.

Candidates are expected to have a general grasp of the subject, and be acquainted with the tendencies of recent research into inorganic chemical problems and to grasp the principles on which such problems can be investigated.

Paper II.—Organic Chemistry.

The subject as for the B. Sc. (Subsidiary) Examination, treated more fully, including the consideration of the following matters, not then discussed :—

Organometallic compounds.

Carbohydrates and their configuration ; the simpler Glucosides.

The purin group.

The diketones.

Polymethylene compounds.

The principal terpenes and camphors.

Indigo and its derivatives.

Heterocyclic compounds generally.

The simpler members of the alkaloid group.

Proteids and their derivatives.

Enzymes and enzyme action.

Candidates are expected to have a general grasp of the subject, and to be acquainted with the tendencies of recent research into organic chemical problems and to grasp the principles on which such problems can be investigated.

Paper III.—General and Physical Chemistry.

The subject as for the B.Sc. (Subsidiary) Examination, treated more fully, including the consideration of the following matters, not then discussed :—

Chemical dynamics. Velocity of chemical reactions.

Application of Thermodynamics to chemical phenomena.

Chemical affinity. Relative strength of acids and bases.

Influence of the nature, composition and constitution of substances on their affinity.

Photo-chemistry.

Relation between chemical and electrical energy.

Radio-activity. Mass Spectra. The structure of the atom.

Candidates are expected to have a general grasp of the subject, and to be acquainted with the tendencies of the recent research into physico-chemical problems, and to grasp the principles on which such problems can be investigated.

Paper IV.—Essay or essays on Chemical Subjects.

Practical Examination.

Each candidate must produce a certificate from the Head of the Chemistry Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

COURSE OF PRACTICAL WORK AT PRESENT PRESCRIBED.

1. Exercise in qualitative analysis, such as the analysis of artificial mixtures of moderate complexity, of alloys and of ores.

2. Preparation of inorganic substances, so chosen as to elicit evidence of the candidate's acquaintance with ordinary chemical operations.

3. The preparation of organic compounds, involving ordinary brominations, nitrations, condensations and the like. Common methods of purification of organic compounds. Detection of common organic groups. The investigation of simple unknown organic compounds.

4. Ordinary physico-chemical determinations, such as determinations of boiling point, melting point, freezing point, solubility, density, molecular weight and the like. Determination of the velocity of typical reactions. Determination of electric conductivities.

5. The gravimetric and volumetric estimation of commonly occurring substances. Organic combustions.

[N. B.—The use of reference books may be permitted during the Practical Examination.]

R. 97.

(4).—BOTANY.

As a Subsidiary Subject.

(Two Papers and two Practical Examinations.)

The Course and Syllabus are identical with those for the B.A. Honours Examination (*vide* pp. 157–158).

As a Principal Subject.

(Four Papers and four Practical Examinations.)

Paper I.—Organography, External and internal Morphology.

Paper II.—Classification, Plant Geography and Fossil Botany.

Paper III.—Physiology, Ecology and Genetics.

Paper IV.—An essay or essays on a botanical subject.

Practical I.—External Morphology.

Practical II.—Internal Morphology.

Practical III.—Classification (including fossil plants).

Practical IV.—Physiology and Ecology.

Details of the theoretical and practical courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

The Subsidiary Syllabus *plus* a knowledge of the following :—

I.—*Organography and External Morphology*.—Embryology, development of organs, evolution of sex, evolution of floral parts and mechanisms.

II.—*Internal Morphology*.—Detailed knowledge of cell structure including study of the cell wall, cytoplasm and its inclusions, nucleus and the phases of its division, anatomico-physiological study of tissues and tissue systems.

The various types of vascular construction, monostelic, schizostelic, dictyostelic and solenostelic, and their sequence in evolution.

The internal structure of reproductive organs, reproductive cells, their development and history.

III.—*Physiology*.—Detailed study of the physiology of the cell and of the energy relations of the plant.

IV.—*Ecology*.—Plant communities, their origin, development and classification.

V.—*Plant Geography*.—The main plant-geographical regions of the world, the main characters of their vegetation.

VI.—*Fossil Botany*.—A general idea of the various groups of fossil plants, their relationships to the living groups and their importance in tracing the sequence of plant forms in evolution.

VII.—*Genetics*.—The physical basis of inheritance, experimental methods of studying evolution, variation, mutation, the study of hybridisation before Mendel, Mendelism, Neo-Mendelism.

VIII.—*Classification*.—A detailed knowledge of the following groups and types in addition to those prescribed for the Subsidiary subject :—

Thallophyta.—Myxomycetes, Heterokontæ, Ulothrix.

Bryophyta.—Riccia, Pellia, Anthoceros.

Pteridophyta.—Osmunda, Ophioglossum, Angiopteris, Marsilia, Azolia.

Spermaphyta.—Gymnospermæ Gnetaceæ.

Angiospermæ.—Monocotyledones: Hydrocharitaceæ, Bromeliaceæ, Pontederiaceæ, Commelinaceæ, Lemnaceæ, Pandanaceæ, Araceæ, Naiadaceæ, Cyperaceæ.—Dicotyledones; Casuarinaceæ. Menispermaceæ. Nymphaeaceæ, Papaveraceæ, Capparidaceæ, Portulacaceæ, Guttiferæ, Sterculiaceæ, Tiliaceæ, Meliaceæ, Rhamnaceæ, Ampelidaceæ, Sapindaceæ, Moringaceæ, Crassulaceæ, Rhizophoraceæ, Lythraceæ, Onagraceæ, Passifloraceæ, Umbelliferæ, Sapotaceæ, Boraginaceæ, Lentibulariaceæ, Bignoniaceæ, Pedalineeæ, Acanthaceæ, Chenopodiaceæ, Polygonaceæ, Loranthaceæ.

Practical Examination.

Each candidate must produce a certificate from the Head of the Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

The practical examination shall consist of :—

(1) A knowledge of microtechnique including fixing, staining and section cutting.

(2) A practical knowledge of ordinary experiments in the nutrition, growth, response and reproduction of plants.

(3) A practical study of the external and internal structure of the various ecological types of plants. An acquaintance with the apparatus for measuring environmental factors.

(4) The identification with the aid of floristic works of plants belonging to the orders in section VIII above and in section V of the Subsidiary subject course.

R. 98.

(5).—ZOOLOGY.

As a Subsidiary Subject.

(Two Papers and two Practical Examinations.)

The Course and Syllabus are identical with those for the B. A. Honours Examination (*vide* pp. 159–161).

As a Principal Subject.

(Four Papers and four Practical Examinations.)

Paper I.—Essay or Essays on a zoological subject.

Paper II.—Invertebrates.

Paper III.—Vertebrates and Comparative Anatomy.

Paper IV.—Cytology, Histology and Embryology.

Practicals : not more than six hours each :—

Practical I.—Dissection of animals.

Practical II.—Identification of animals and their parts.

Practical III.—Microscopic Technique.

Practical IV.—*Viva voce*.

The Subsidiary Syllabus *plus* the following should be studied :—

Cytology.—Parthenogenesis, Sex chromosomes, Golgi Apparatus and other cell inclusions.

Embryology.—Metamorphosis of Frog. Development of Chick for the first three days. Formation of foetal membranes in chick and rabbit. The following larvæ should be studied :—

Amphiblastula, Actinula, Ephyra, Planula, Cercaria, Hexacanth larva, Trochophore. Phyllosoma, Mysis, Megalopa, Zoæa, Nauplius, various types of insect larvæ, Glochidea, Veliger, Pluteus, Bipinnaria, Tornaria, Auricularia, Ascidian Tadpole.

Philosophy of Zoology.—Convergent and Divergent Evolution. Neo-Lamarckism, Neo-Darwinism, etc. Distribution of Animals in time and space. Outlines of history of Zoology.

Systematic Zoology.—All classes including the exceptions of the B. Sc. Subsidiary standard should be studied. Candidates must show a personal and practical acquaintance with dissections, structures, functions and life-history of such animals as may be from time to time prescribed by the Academic Council on the recommendation of the Board of Studies. The following animals marked with an asterisk are at present prescribed. They must be able to identify as thoroughly as possible unmarked animals.

Amœba,* Parmœcium,* Vorticella,* Entamœba,* Polystomella,* Arcella,* Euglina,* Volvox,* Noctiluca,* Herpeto-

monas,* Trypanosoma,* Laverania,* Monocystis,* Euplotes, Opalina, Nectotherus, Spongilla,* Leucosolenia,* Grantia,* Hydra,* Obelia,* Tealia, Sertularia, Halocordyle,* Campanularia, Hydractinia,* Ctenaria,* Trachymedusæ, Narcomedusæ, Physalia,* Porpita,* Vellella,* Charibdea, Aurelia,* Edwardsia,* Alcyonium,* Gorgonia,* Cavernularia,* Pennatula,* Pleurobrachia,* Berce, Tricladida, Planaria,* Distomum,* Tænia,* Amphistomum, Ascaris,* Filaria, Drocunculus,* Nemertinia, Sagitta,* Polynœ,* Saballid,* Nereis,* Arenicola, Serpulid,* Pectinaria, Spirorbis, Pheretima,* Megascolex,* Hirudo,* Thalassema, Sipunculus,* Brachionous.*

Branchipus,* Cyclops,* Cypris,* Daphnia,* Balanus,* Lepas,* Penæus,* Scylla,* Squilla, Panulirus,* Sacculina,* Gammarus,* Pagurus,* Mysis, Argulus, Lepisma, Forficula, Periplaneta,* Culex or Anopheles,* Mallophaga, Acridium, Hierodula, Grillotalpa, Odontotermes, Aeschnid, Musca,* Cimex, Xenopsylla, Scolopendra,* Lygæus, Nepa, Gerris, Aphis, Coccid, Buthus,* Limulus, Ixodes, Peripatus, various types of insects, mouth parts, six typical Butterflies and Moths,* Wasps, Apis, Formica, Melolontha, Coccinillid, Buprestid, Curculionid, Dytiscus, Hippobosca, Oestrus, Heteropoda, Pycnogonidia.

Unio,* Placuna,* Aplysia,* Patella,* Ampullaria, Ariophanta, Doris,* Cardium, Teredo, Sepia,* Loligo, Octopus,* Nautilus, Dentalium Nucula, Mytilus, Pecten, Ostrea, Venus Solen, Chiton,* Margaritifera, Oliva, Trochotoma, Conus, Strombus, Cypræa, Trigonina.

Flustra,* Crisia, Lingula,* Asteria, Echinus, Ophiuroid, Antedon, Cucumaria.*

Balanoglossus, Amphioxus, Doliolum, Salpa, Polycarpa,* Compound Ascidian,* Petromyzon, Lepidosiren, Acipenser, Chiemera, Carcharias,* Zygaena, Chiloscylidium,* Rhynchobatus, Narcine, Trygon, Ophichthys, Axyrus, Barbus, Chirocentrus, Clupea, Coilia, Harpodon, Belone, Hemiramphus, Exocoetus, Serranus, Drepane, Upeneoides, Pterois, Polyne-mus, Sciæna,* Trichiurus Caranx, Stromateus, Cybium, Echeneis, Boleophthalmus, Mugil, Anabas, Synaptura, Triacanthus, Ostracion, Tetradon, Hippocampus, Rana,* Rhacophorus, Bufo,* Tylostrotion, Ichthyophis, Triton, Pipa, Amblystoma, Axolotl.

Calotes,* Varanus,* Hemidactylus,* Sitana, Draco, Uromastix, Ophisaurus, Mabuia, Chamæleon, Typhlops, Python, Eryx, Sylibiura, Lycodon, Dipsadomorphus, Zamenis,* Tropidonotus, Chersydrus, Dryophis Bungarus, Naia, Lachesis, Echis, Vipera, Hydrus, Enhydrina, Crocodilus, Gavialis, Trionyx,* Testudo, Chelone.

Struthio, Spheniscus, Podiceps, Pelecanus, Ardea, Phoenicop-terus, Anser, Cygnus, Falco, Milvus, Pseudogyrus, Lophophorus, Grus, Fulica, Bubulcus, Larus, Columba,* Palæor-

nis, Eudynamis, Upupa, Alcedo, Strix,* Brachypternus, Coracias, Zantholæma, Passer, Corvus, Ploceus, Dicrurus, Orthotomus, Acridotheres, Galerita, Coccystes, Molpastes, Copsychus, Argya, Archæopteryx.

Echidna, Ornithorhynchus, Macropus, Manis, Phocæna, Halicore, Lepus, Equus, Hystrix, Mus, Gerbillus, Funambulus, Pteropus,* Synopterus, Megaderma, Paracechinus, Hyæna, Canis, Galiopithecus, Crocidura, Felis,* Viverricula, Paradoxurus, Herpestes, Pitheculus, Macacus.

Practical Examinations.

Each candidate must produce a certificate from the Head of the Zoology Department of his College, that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals and a series of not less than twenty-five preparations of animals or animal tissues for the microscope at the practical examination. Such journals may be taken into account by the Examiners in assigning marks.

The practical examination shall include (1) dissections and detailed zoological description and identification of the animals prescribed above, (2) preparation and identification of sections of animals and their structure under the microscope prescribed above, and (3) a knowledge of microtechnique including fixing, staining a section, cutting, etc.

R. 99.

(6).—GEOLOGY.

As a Subsidiary Subject.

(Two Papers and two Practical Examinations.)

Paper I.—(a) Physical Geography, (b) Crystallography, Mineralogy and Petrology, (c) Physical Geology.

Paper II.—(d) Structural Geology, (e) Stratigraphy and Palæontology, (f) Indian Geology.

Paper I.

(a) *Physical Geography*.—The earth as a planet. Positions of the earth in the solar system. Form, size, and motions of the earth. Effects of revolution and rotation. The atmosphere. Its composition, height, pressure, temperature and moisture. Its movements and general phenomena in relation to climate. Fog and clouds. Rain, snow and hail. Frost and ice. The climates of India. The distribution of land and water. The sea and the tides. Ocean currents. Mountain building and valley carving. Rivers, lakes and springs. Sub-aerial or exterior agencies; atmospheric, aqueous, organic and chemical. Winds and gases of the atmosphere. Weathering and denudation. Rain water. Underground waters. Work of rivers

and streams. Work of ice. Glaciers. Subterranean or internal agencies. The interior of the earth and the phenomena connected with its internal heat. Volcanoes. Geysers. Earthquakes. Elevation and depression of land.

- (b) *Crystallography, Mineralogy and Petrology*.—Principles of Crystallography. Crystal structure. The Crystalline systems—Crystalline axes. Law of symmetry. Twinning, biaxial and uniaxial crystals. Classification of rocks, igneous, sedimentary and metamorphic rocks. Agents of metamorphism. Local and regional metamorphism. Important Indian ores.
- (c) *Physical Geology*.—The atmosphere, hydrosphere, and lithosphere. Hypogene actions. Volcanoes and volcanic actions. Earthquakes. Secular upheaval and subsidence. Epigene actions. Denudation and deposition. Geological action of plants and animals. Coral reefs.

Paper II.

- (d) *Structural Geology*.—Stratification. Joints. Inclination of rocks. Curvature. Cleavage. Dislocation of rocks. Unconformity. Simple problems in Structural Geology. Eruptive and intrusive rocks. Mineral veins, their origin, structure and contents. Successive infilling. Relation of contents to faults and surrounding rocks. Decomposition and recomposition.
- (e) *Stratigraphy and Palæontology*.—General principles of stratigraphy. Table of stratified formations. Classifications of the rocks of the earth's crust. The general characters of the rocks, minerals and fossils of the Primary, Secondary and Tertiary rocks. Local developments. Condition of the entombment and reservation of organic remains, both on land and in water. Fossilisation. Uses of fossils in Geology. Rules of nomenclature. Fossils as indicative of stratigraphical order. Relative palæontological value of organic remains. Bearing of palæontological dates upon evolution. Classification, distribution and range of leading fossils.
- (f) *Indian Geology*.—The relation of Indian and European formations. The geology of the Crystalline and Metamorphic rocks of India. The Gondawana System. The Deccan and Malwa traps. Tertiary deposits. The geological history, generally of the Indian Peninsula and Burma.

Practical Laboratory and Field-work.—(1) Identification* of important minerals and rocks and typical fossils, (2) notes on blowpipe analyses of *fifteen* typical minerals, (3) the drawing of the crystalline forms of at least *fifteen* typical minerals, (4) entry into proper journals of the description of *twenty* hand-specimens and slides of typical rocks, with drawings of at least six of these slides, (5) preparation of the geological map of India and Burma, (6) interpretation of geological maps and drawing of geological sections, (7) the drawing of at least *twenty* typical fossils.

*The use of Petrological tables allowed.

Excursion or excursions to any places of geological interest under the immediate guidance of the Professor. The aggregate time spent on the excursions shall not be less than *seven* days during the course. Students shall keep notes of the work done in the field.

Each candidate must produce a certificate from the Head of the Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in his laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

The practical examination shall consist of an examination of the laboratory and field-work of the student as shown by his journals and the identification of specimens of typical minerals, rocks and fossils. The laboratory journal and field notes will be considered in assigning marks at the time of the practical examination.

As a Principal Subject.

(Four Papers and three Practical Examinations.)

Paper I.—(a) Physical Geology, (b) Structural Geology.

Paper II.—(c) Crystallography and Mineralogy, (d) Petrology.

Paper III.—(e) Stratigraphy and Palæontology.

Paper IV.—(f) Indian Geology.

Details of the theoretical and practical courses will be specified from time to time by the Academic Council, on the recommendation of the Board of Studies.

Paper I.

- (a) *Physical Geology*.—The atmosphere, hydrosphere, lithosphere, pyrosphere and centrosphere. The atmosphere as a geological agent. Light and temperature. Wind erosion and transportation. Electrical phenomena. Eolian deposits. Oceans, lakes and rivers. The drainage basins of rivers. Geological work of rivers. Underground water. Zones of weathering and cementation. Sea as a geological agent. Terrigenous deposits. Continental shelf. Littoral, pelagic and abyssal deposits. Glaciers and ice-sheets. Glacial deposits and glaciation. Organic agencies. Biogenic rocks. Coral reefs. Man as a geological agent. Sculpturing of the lithosphere. Denudation and erosion. Theories of the conditions of the interior of the earth. Evolution and age of the earth. Volcanic activities. Structure of volcanoes. Distribution of volcanoes. Crust creep. Earthquakes. Seismographs. Epeirogenic and orogenic movements.
- (b) *Structural Geology*.—Stratification. Types of stratification. False and cross-beddings. Surface markings. Unconfor-

mity and over-lap. Fracture of rocks. Joints and cleavage of rocks. Inclination of rocks. Folding. Faults, their classification, origin and detection. Problems in structural geology. Eruptive and intrusive rocks. Sequence of eruptive rocks. Plutonic, intrusive and contemporaneous. Magmatic segregations. Pneumatolysis. Hydatogenesis and metasomatic ores. Solution ores. Detrital and alluvial deposits. Primary and secondary deposits. Mineral veins. Lodges, their origin, structure and contents. Successive infilling. Connection with faults and cross-veins. Relation of contents to surrounding rocks. Stocks and stock-works.

Paper II.

- (c) *Crystallography and Mineralogy*.—The principles of crystallography. Crystal structure, crystal individual, and crystal aggregate. Crystalline systems. Thirty-two types of crystal symmetry. Systems of crystal notation. Zonal characters. Twinned and pseudo-symmetric crystals and their formation. Parting planes, percussion figures and etched figures. Use of contact goniometer. Physical properties, characteristic of crystals. Optical properties. Biaxial and uniaxial crystals. Theories of crystalline structure. Rock forming minerals, secondary minerals, metamorphic minerals and minerals of commercial value. Optic, thermal, electrical and magnetic properties of minerals. Axes of extinction. Physical, chemical and pyrognetic characters of minerals. Water of crystallization. Occluded water. Specific gravity apparatus.
- (d) *Petrology*.—Megascopic and microscopic examination of rocks. Structure, composition, state of aggregation, colour and lustre, feel and smell, specific gravity and magnetism of rocks. Classification of rocks. Sedimentary rocks, elastic and crystalline rocks. Eruptive and schistose rocks. Marbles and limestones. Effects of heat, heated water, compression, tension and fracture on rocks. Metamorphism of rocks. Induration of rocks. Mineral transformations. Kinds of metamorphism. The glassy and porphyritic rocks. Calcareous, siliceous, phosphatic, glauconitic, carbonaceous and ferruginous rocks. Intrusive rocks. Their effects on contiguous rocks.

Paper III.

- (e) *Stratigraphy and Palæontology*.—Principles of stratigraphy. Correlation of geological formations. Groups, life, periods and systems. Lithology and characteristic fossils of the rocks of the different systems. Scenic and economic aspects. Physical geography and vulcanicity of the different periods. Orogenic upheavals. Conditions for the entombment and preservation of organic remains on land and in sea. Fossilisation. Uses of fossils in Geology. Relative palæontological value of organic remains. Imperfection of geological record. Classification, distribution and range of fossils. Orders, genera and species. The bearing of palæon-

tological data upon evolution. Morphological characters of typical fossils. Drawing of fossils. Zone fossils and their use. Appearance and extinction of new types.

Paper IV.

- (f) *Indian Geology.*—The physical geography and the geological history of the Indian Peninsula and Burma. Peninsular area, Indo-Gangetic plain and the extra-peninsular areas. The relation of Indian and European formations. The geology, petrology and distribution of Archæan, Purana, Dravidian and Aryan groups of rocks. Crystalline complex and Metamorphic rocks. Eruptive and schistose gneisses. Archæan crust movements. Unfossiliferous and fossiliferous older palæozoic rocks of peninsular and extra-peninsular areas. Upper palæozoic crust movements. The Gondwana system. Homotaxis of the Gondwanas. The Deccan trap. Infra and intertrappean beds. Tertiary rocks of the extra-peninsular area. Yenangyaung and Prome beds of Burma. Siwaliks of the Sub-Himalayas. The age and origin of the Himalayas. The Western Ghats. General character, composition, origin, distribution, mode of occurrence and the age of laterite. Recent alluvial deposits. Porbandar stone. Desert sand and older alluvium of Narbada and Godavari. The chief metalliferous ores of India. Their distribution, occurrence and commercial value. Petroleum and mineral oil.

Practical Laboratory work shall consist of (1) preparation of *six* petrological slides; (2) entry into proper journals of the description of *twenty-five* hand-specimens and slides of typical rocks with drawings of at least *ten* of these slides; (3) drawings of the crystalline forms of at least *fifteen* minerals and the drawing of *twenty-five* typical fossils; (4) notes on blow-pipe analysis of *twenty* minerals; (5) preparation of the geological map of India and Burma. Students should be acquainted with the construction and use of a petrological microscope and its accessories. They should be able to interpret and draw geological maps and sections.

Field-work.—Excursion or excursions to any places of geological interest under the immediate guidance of a Professor. The aggregate time spent on the excursions shall not be less than *fifteen* days during the course. Students shall keep a full journal of the work done in the field, including a sketch map with the requisite sections, of an area of about 25 square miles.

Each candidate must produce a certificate from the Head of the Department of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and that his laboratory journal has been properly kept. Every candidate must have recorded his observations directly in the laboratory journal and written therein a report on each exercise performed. Every journal is to be signed periodically by a member of the laboratory staff. Candidates are to produce their laboratory journals at the practical examination.

The practical examination shall consist of an examination on the laboratory and field work of the student as shown by his journal and the identification of specimens of typical minerals, rocks and fossils.

R. 100.

(7).—ANIMAL PHYSIOLOGY.

As a Subsidiary Subject.

(Two Papers and two Practical Examinations.)

Chemical composition of the animal body. Physiology of the cell. Histology of animal tissues. Physiology of movement, skeleton. General physiology of muscle and nerve. Foods and dietetics. Digestion, absorption and nutrition. The blood, the lymph and tissue fluids. Physiology of the heart and blood vessels. Respiration. Excretion. External and internal secretions. Metabolism. Central and peripheral organs of the nervous system, including their origin and development. The spinal cord. The brain. Cranial nerves. Autonomic nervous system. Phonation, articulate speech. Senses of touch, taste and smell. Sense of sight and hearing. Sensations of movement and position. Labyrinthine sensations. Immunity. Physiology of sleep. The skin. The animal heat. Reproduction. Heredity.

General Physiology.—Protoplasm, its structure and properties. Energetics. Surface action, including surface tension, surface energy, electric charge, adsorption, molecular structure of interfaces. The colloidal state. Permeability of membranes and properties of surface of cells. Osmotic pressure. Electrolytes and their action. Functions and properties of water. Catalysis and enzymes. Secretion and digestion. Excitation and inhibition. Receptor organs. Tonus. Oxidation and reduction. The action of light. Electrical changes in tissues. Hormones.

Candidates should have undergone a course of practical instruction in Histology, Physiological Chemistry and Experimental Physiology. Each candidate must produce his laboratory note-books and journals duly certified by his teacher as a faithful record of actual work done by him.

The practical examinations will include examination in Histology, Physiological Chemistry and Experimental Physiology as well as a *viva voce* examination.

As a Principal Subject.

(Three Papers, three Practical Examinations and an Oral Examination with reference to the special branch of the subject selected by the candidate.)

Details of the theoretical and practical courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

A fuller knowledge of the above (Subsidiary) syllabus in all its branches. Candidates for the Final B. Sc. Examination in Physiology will be required—

1. To show a sound knowledge of Animal Physiology, both General and Special.

2. To have undergone the following course in Practical Physiology :—

- (a) Special methods in advanced Histology.
- (b) Advanced Physiological Chemistry.
- (c) Advanced methods of Experimental investigation.

3. In addition to the above, the candidate must specialise in one of the following branches of this subject *or* submit a thesis on the special work done, together with preparations, etc. :—

- (a) Physiological Chemistry.
- (b) Digestion and metabolism, including internal secretions.
- (c) Circulation and respiration.
- (d) Neuromuscular system.
- (e) Special senses and Experimental Psychology.
- (f) Histology and Embryology from the Physiological aspect.

Examination will consist of—

- (1) Written papers—three.
- (2) Practical Examinations—three.
- (3) Oral Examination with reference to the special branch of the subject selected by the candidate.

R. 101.

(8).—MICROBIOLOGY.

As a Subsidiary Subject.

(Two Papers, two Practical Examinations and an oral Examination.)

A-I.—Micro-organisms and their position in nature—their classification and distribution—parasites and saprophytes—aerobic and anaerobic cultivation—conditions of growth—structure and physiology of micro-organisms—filtrable and ultramicroscopic organisms.

II. Applied Microbiology :—

- (a) Microbiology of air.
- (b) do of water.
- (c) do of soil and agriculture.
- (d) do of sewage and sewage disposal.
- (e) do of milk and milk products.
- (f) do of food and microbial poisoning.
- (g) do of alcoholic fermentation and derived products.
- (h) do of special industries.
- (i) do of diseases of plants.
- (j) do of diseases of men and domestic animals.

B.—The student must have a working knowledge of microscopy and general laboratory technique and must produce evidence of having worked in a laboratory for at least six months.

The examination will consist of—

- (1) Written papers—two.
- (2) Practical examinations—two.
- (3) An oral examination.

As a Principal Subject.

(Three Papers, three Practical Examinations and an Oral Examination.)

Details of the theoretical and practical courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

A-I.—Classification and relationship of micro-organisms :—

(a) General :—

Microbial cytology.

(b) Special :—

(i) Protozoa.

(ii) Fungi.

(iii) Bacteria.

(iv) Intermediate forms between Fungi and Bacteria proper.

(v) Ultra-microscopic organisms.

II.—Physiology of micro-organisms :—

(a) Physical forces involved in biological activities :—

Energy—moisture—temperature—electrical conductivity—ionisation and dissociation—hydrogen-ion concentration—surface-tension—absorption—diffusion—osmosis—dialysis.

(b) Chemical factors determining stimulation and inhibition of growth.

(c) Chemical composition of micro-organisms.

(d) Nutrition and metabolism.

Food of micro-organisms—products and results of microbial activity. Metabolic processes in micro-organisms—certain inherent factors influencing these processes—micro-organisms and the rotation of elements in nature, viz., carbon cycle, nitrogen cycle, sulphur cycle and phosphorus cycle.

(e) Auto-trophic micro-organisms—saprophytes—parasite—symbions.

III.—Applied Microbiology :—

1. *Suitable for Medical Students* :—

(a) Microbiology of air—microbial air influence in diseases of men and animals—dust infections—droplet infections.

(b) Microbiology of water—interpretation of the bacteriological analysis of water—water in relation to infectious diseases. Filters.

- (c) Microbiology of sewage—effect of bacterial treatment on pathogenic organisms—Septic tank system—activated sludge process.
 - (d) Microbiology of soil—relation of soil to bacterial diseases.
 - (e) Microbiology of milk—micro-organisms which are beneficial and detrimental to health—milk as a carrier of disease organisms.
 - (f) Microbiology of milk products—pathogenic bacteria in butter—poisonous cheese.
 - (g) Microbiology of food—microbial food poisoning.
 - (h) Microbiology of the digestive and respiratory tracts—micro-organisms of the faeces.
 - (i) Micro-organisms in relation to diseases of men—diseases caused by moulds and yeasts—diseases caused by protozoa and spiral organisms—diseases of unknown etiology.
 - (j) Infection and immunity—manufacture of vaccines, antisera, tuberculins—control of infectious diseases.
2. *Suitable for Chemistry Students :—*
- (a) Microbiology of air : microbial air influence in fermentation, putrefaction and decay.
 - (b) Microbiology of water : interpretation of the bacteriological analysis of water—purification by ozone and by chemicals.
 - (c) Microbiology of sewage : putrefactive and anaerobic bacteria—oxidising bacteria—destruction of sewage bacteria by chemical processes.
 - (d) Microbiology of soil : decomposition of organic matter in the soil—fixation of atmospheric nitrogen—changes in inorganic constituents.
 - (e) Microbiology of milk : normal development of micro-organisms in milk—butyric acid fermentation—abnormal fermentations.
 - (f) Microbiology of milk products : decomposition processes in butter—normal and abnormal ripening of cheese—fermented milk beverages.
 - (g) Microbiology of food : fermented foods—bacterial infection of food—chemical nature of food poisons—preservation of food by chemicals.
 - (h) Microbiology of alcoholic fermentation : lactic, butyric, citric fermentations.
 - (i) Microbiology of alcoholic products : alcoholic beverages—acetic fermentation.
 - (j) Fermentation of cocoa, coffee, tea, indigo, tobacco, opium—manufacture of starch—retting—tanning.
3. *Suitable for Agricultural Students :—*
- (a) Microbiology of air : microbial air influence in diseases of men and animals—dust infections—droplet infections.

- (b) Microbiology of water : interpretation of the bacteriological analysis of water—water in relation to infectious diseases. Filters.
- (c) Micro-organisms in relation to soil and agriculture :—
 Number and distribution of bacteria in the soil—distribution at different depths—ammonifying, nitrifying, denitrifying and nitrogen fixing bacteria, seasonal variation of bacterial activity, aerobic and anaerobic—rate of oxidation of carbon, hydrogen, sulphur, and nitrogen—mineralisation of organic matter—production and assimilation of plant-food—changes in inorganic constituents of soil.
- (d) Microbiology of the manure pile, green manure.
- (e) Micro-organisms in relation to sewage disposal—septic tank system—activated sludge process.
- (f) Micro-organisms in relation to milk and milk products—sources of micro-organisms in milk—types of organisms found in milk—milk as a carrier of disease-producing organisms. Butter—ripening of cream and its control—use of pure culture in butter making. Cheese—types of cheese—curdling of milk—manipulation of curd—ripening of cheese—causes of proteolysis, prevention of putrefaction. Other home and dairy products—curds—buttermilk—condensed milk—evaporated milk—concentrated milk—powdered milk—ice-cream—special milk drinks made by the action of micro-organisms.
- (g) Micro-organisms in relation to—
 Food and food preservation—desiccation—evaporation and drying of foods—preservation of food by cold, by heat, by chemicals—fermented foods—bread—malt—syrops—starch—sugar—tea—silage.
- (h) Microbiology of special industries—indigo—retting—tobacco and vinegar.
- (i) Microbial diseases of plants—blights—galls and tumours—leaf spots—rots—wilts—their control.
- (j) Microbial diseases of insects—flacheri, pebrine—foul brood, black brood, sac brood, locust epizootic, septicaemia of the cockchafer—graphitosis.

B.—The student must submit a laboratory diary showing that he has done practical work for at least three terms in a laboratory in:—

- (a) the preparation of various culture media ;
- (b) the practical study of micro-organisms, critical microscopy, biometry and serological methods ;
- (c) the bacteriological examination of the materials studied.

The examination will consist of :—

- (1) Written papers—three. One paper to be on group selected under A-III.

- (2) Practical examinations—three.
- (3) An oral examination with special reference to the group selected under A. III.

R. 102.

(9).—HUMAN ANATOMY AND EMBRYOLOGY.

As a Subsidiary Subject.*Human Anatomy.*

Bones, Joints, Muscles, Nervous System (including the organs of special sense), Vascular, Respiratory, Digestive and Urogenital systems, Ductless glands. Regional Anatomy of the head, the neck, the thorax, the abdomen and the extremities. Surface Anatomy.

Embryology.

Germ cells, their origin and structure ; Maturation and fertilization, Segmentation ; Germinal Layers, Early stages of the Chick ; Principles of Organic Evolution ; Foetal membranes and Placenta.

Practical Work.

Each candidate shall produce a certificate from the Head of the Department of Anatomy that he has carried out in a satisfactory manner the dissection of the entire human body for three medical terms and has done practical work in Embryology and Cytology for a period of one medical term.

The practical work in Embryology and Cytology comprises :—

Microscopic technique including fixing, staining, section cutting and mounting of specimens.

The development of the chick upto the end of the third day of incubation.

The study of Cell, Mitosis, Meiosis and Fertilization.

The examination shall consist of—

Paper I.—Human Anatomy.

Paper II.—Embryology, Cytology and the Principles of Organic Evolution.

Two practical examinations and an oral examination.

BOOKS RECOMMENDED.

Gray's Anatomy.

Cunningham's Text-book of Anatomy.

Cunningham's Manual of Practical Anatomy in three volumes.

Keith's Human Embryology and Morphology.

McMurrich—The Development of the Human Body—A Manual of Human Embryology.

Lock and Doncaster—Variation, Evolution and Heredity.

As a Principal Subject.

A fuller knowledge of the above (Subsidiary) syllabus in all its branches, and in addition the following :—

- (1) Anatomy of the human foetus.

(2) Principles of Morphology comprising—

(a) Vertebrate Embryology, including Cytology as illustrated by the development of—

Amphioxus, Frog, Chick and Rabbit.

(b) Comparative Anatomy of the vertebrates as illustrated by—Amphioxus, Fish (Dog Fish), Frog, Lizard, Pigeon, Rabbit, or Guinea pig.

(3) Principles of Organic Evolution.

Practical Work

Each candidate shall produce a certificate from the Head of the Department of Anatomy that he has carried out in a satisfactory manner the dissection of the entire human body and has done practical work on the remaining parts of the syllabus including an intensive study of the development of the chick up to the end of the fourth day for a period of three medical terms.

(Four Papers in the following order).

Paper I—Human Anatomy.

Paper II—The Comparative Anatomy of the Vertebrates. The Principles of Organic Evolution.

Paper III—Embryology and Cytology.

Paper IV—Essay.

Practical Examinations.

1. Human Anatomy.
2. Comparative Anatomy.
3. Cytology and Embryology of vertebrates.
4. Viva voce and general microscopic technique.

BOOKS RECOMMENDED.

1. Doncaster—Cytology.
2. McEwen—Vertebrate Embryology.
3. Kingslay—Comparative Anatomy of Vertebrates.
4. Duckworth—Morphology and Anthropology.
5. Dendy—Outlines of Evolutionary Biology.
6. Lubosch—Introduction to Scientific Anatomy, translated by Woollard.
7. Jenkins—Vertebrate Embryology.

Details of the theoretical and practical courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

R. 103. (10).—EXPERIMENTAL PSYCHOLOGY.**As a Subsidiary Subject.**

(Two Papers and two Practical Examinations.)

As a Principal Subject.

(Three Papers and three Practical Examinations.)

Details of the theoretical and practical courses will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

Standard for Passing the Examination.

R. 104. To pass the examination a candidate must obtain in each subject thirty-three per cent. marks separately in the papers taken together, and in the practical examinations taken together, or in Mathematics in all the papers taken together. Should a candidate fail in either the practical or written examination in the Subsidiary subject only, he may be declared, by a majority of not less than two-thirds of the Examiners present at the final meeting, to have passed the examination, provided he obtains at least forty per cent. of the total marks in his Principal subject. Those of the successful candidates who obtain forty per cent. of the total marks in the Subsidiary subject and forty-eight per cent. of the total marks in the Principal subject will be placed in the Second Class. Those of the successful candidates who obtain forty-five per cent. of the total marks in the Subsidiary subject and sixty per cent. of the total marks in the Principal subject will be placed in the First Class. Also those of the successful candidates who obtain forty-eight per cent. of the total marks in the Subsidiary and Principal subjects taken together will be placed in the Second Class, provided they obtain at least forty-five per cent. in the Principal subject, and those who obtain sixty per cent. of the total marks in the Subsidiary and Principal subjects taken together will be placed in the First Class provided they obtain fifty-five per cent. at least in the Principal subject. Of the candidates placed in the First Class, those who obtain sixty-six per cent. marks or more in the Principal subject will be declared to have passed with *distinction* in that subject.

R. 105. A candidate who secures forty-four per cent. of the total marks in his Principal subject at any one examination may, at his option, be excuse from appearing again in that subject (provided he has obtained the minima in the papers and in the practicals required by Regulation 104), and will be eligible for the B.Sc. degree by qualifying in accordance with Regulation 104 in the Subsidiary subject at a subsequent examination. A candidate who passes his B.Sc. Examination in this way will not be eligible for a class, prize or scholarship awarded at the examination. The Subsidiary subject mentioned herein shall be held also to mean the Honours subject taken by a Bachelor of Arts with Honours in a Science group and from which he claims exemption while appearing for the B.Sc. Examination.

R. 106. A candidate intending to offer Principal Physiology and Subsidiary Anatomy or Principal Anatomy and Subsidiary Physiology, who has passed either the Intermediate M. B., B.S. or the First M.B., B.S. Examination of this University shall be deemed to have passed the

subsidiary examination in Human Anatomy and Embryology and Animal Physiology on producing a certificate from the Head of a College affiliated to this University for the B. Sc. Degree that he has done practical laboratory work in Embryology and Cytology for a period of one medical term.

- R. 107. A candidate securing exemption from the subsidiary examination in Human Anatomy and Embryology or Animal Physiology according to the above regulation shall be required to keep 3 medical terms after passing either the Intermediate M.B., B.S. or the First M.B., B.S. Examination before being allowed to sit for the B.Sc. Examination with Human Anatomy and Embryology or Animal Physiology as his principal subject. These terms shall not count for the M.B., B.S. degrees.

CHAPTER XII.—MASTER OF SCIENCE.

Admission.

- O. 227. (a) Any person who has passed the B.Sc. Examination of this University or the B.Sc. Examination of any other University recognized by this University which may be considered by the Academic Council equivalent to the B.Sc. Examination of this University not less than two academical years previously and who has formally received the B.Sc. degree, may be admitted to the examination for the Degree of Master of Science, and should he pass the examination in any one of the branches he will be admitted to the Degree of M.Sc.

(b) On a new application being forwarded and a fresh fee paid, a candidate who has already passed the examination in one branch may appear on a subsequent occasion in a different branch.

- R. 108. The M.Sc. Degree may be taken—

- (1) by research alone ;
- (2) by written examination and practical (where possible);
- (3) by research and examination combined.

- R. 109. The candidate must produce satisfactory evidence before the Board of Studies of having done sufficient work to entitle him to appear for the examination. The candidate is recommended to furnish a detailed and indexed account of all the work done by him since graduation.

- R. 110. A candidate may submit not later than the 14th of February a thesis. Such thesis may be accepted in lieu of the whole or a part of the examination. If the Board of Studies, after consultation with the Professor, if any, under whom the candidate has worked, is satisfied that in its opinion a *prima facie* case has been made out for the consideration of the thesis, it shall submit the thesis to a referee or referees appointed by the Syndicate, who shall report to the Board as to whether the thesis should be accepted in lieu of the whole or any part of the ordinary examination for the Degree of Master of Science. The Board shall then finally decide the nature of the examination to be taken by the candidate and such decision shall be communicated to him by 30th of April.

- R. 111. A candidate who desires to offer a thesis should submit five copies of the text of his thesis with one set of preparations and diagrams, etc.

The thesis must be proved to the satisfaction of the Board of Studies to be the original work of the candidate which may be carried out under the guidance or supervision of the Professor. It should be accompanied by a synopsis and also a statement indicating what the original work of the candidate is and what he has borrowed from others.

R. 112. The examination will comprise the following branches :—

1. Mathematics.
2. Physics.
3. Chemistry.
4. Botany.
5. Zoology.
6. Geology.

R. 113. Each candidate for the Examination shall be required to show, *in addition* to a general acquaintance with the whole of one of the subjects named in Regulation 112 (except Mathematics), a special acquaintance with some one branch thereof.

R. 114. Every candidate for the Degree will first be required to satisfy the Examiners in a paper containing a passage or passages, connected with the branch of Science taken up by him, to be translated from French or German into English, with the help of a dictionary. The language examination must be passed before the presentation of the thesis or, in the case of candidates not offering a thesis, before the submission of the application for admission to the regular examination under Regulation 108 (2).

R. 115. On the recommendation of the Board of Studies, the Academic Council may from time to time prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 116. (1).—MATHEMATICS.

[N. B.—If a candidate has passed his M. A. Examination in one of the Mathematics groups A or B, he will have to appear for the other group to qualify for the degree of M.Sc.]

[The course and syllabus are the same as those of the M. A. Examination *vide* pp. 174–176.]

R. 117. (2).—PHYSICS.

(Four Papers and four Practical Examinations of not more than three hours each.)

In sending in his application to the Registrar each candidate is to enclose a full account of the course of reading and of practical work he has completed, and the lectures he has attended since passing the examination for the Degree of Bachelor of Science.

Candidates will be examined in two groups.

Group A, which will consist of two papers, will be common to all the prescribed subjects in Physics and its scope will be indicated by books to be recommended from time to time by the Academic Council on the recommendation of the Board of Studies.

Group B will comprise the subjects of Radio-Activity, the Electron Theory and Atmospheric Electricity and two papers will be set in this Group. The scope of these subjects will be indicated by books to be recommended from time to time by the Academic Council on the recommendation of the Board of Studies.

The Practicals will not be more than four.

The following books have been prescribed for papers in Group A:—

Paper I.—*Lamb*. (Cambridge) Higher Mechanics. Chapters I, II, III, IV, V, VI, VIII excluding the rigid mathematical proofs, X (omit* 83-84), XII (omit* 106-108).

Ramsay. Hydrodynamics. (G. Bell). 2nd Ed. Chapters *I, II, III, IV, V, VI, VII (*130-137, 149, 150), VIII (*153-160), IX (*176-187), X (omit *245), XI, XII.

Jeans. Electricity and Magnetism. 4th Ed. Chapter VIII (*232-252, *277-282, *306-323, *328-329.)

Haas. Introduction to Theoretical Physics, Vols. I and II.

Paper II.—*Crowther*. Ions, electrons, and Radiations.

Perin. Atoms.

Boynton. Kinetic Theory of Gases.

E. Bloch. Kinetic Theory of Gases (Methuen).

T. P. Nunn. Relativity.

Planck. Einführung in die allgemeine Mechanik.

Planck. Einführung in die Mechanik deformierbarer Körper.

Cl. Schoefer. Einführung in die theoretische Physik, Bd. 1, Bd. 2.

The following books have been prescribed for papers in Group B:—

E. Rutherford. Radio-active substances and their Radiations (Cambridge 1913).

K. Fajans. Radio-activity.

O. W. Richardson. The Electron Theory of Matter.

Andrade. Structure of the Atom.

Mach u. Schweidler. Atmosphärische Elektrizität.

R. 118.

(3).—CHEMISTRY.

(Four Papers and at least four days' Practical Examination.)

Paper I.—Inorganic Chemistry.

Paper II.—Organic Chemistry.

Paper III.—General and Theoretical Chemistry, including the History of Chemistry.

Paper IV.—One of the following :—

- (a) Mineral and Metallurgical Chemistry.
- (b) Physical Chemistry (higher). Candidates who take this branch of the subject are expected to know the simpler portions of the Differential and Integral Calculus and to be able to apply them to chemical problems.
- (c) Organic Chemistry (higher).
- (d) Biological Chemistry and the Chemistry of Foods.

The Academic Council on the recommendation of the Board of Studies, may specify additional subjects under Paper IV.

In each of these papers candidates will be expected to show a thorough acquaintance with the subject including the more important recent developments in the several sections of it. They will be expected to be able to refer to and abstract the recent chemical literature, and be able to suggest methods for the investigation of specific problems.

Practical Examination.

The practical examination will occupy at least four days. The Examiners shall have the option, if they deem such a course advisable, to extend the period of examination. The Examiners are at liberty to apply any test which they think desirable, either *viva voce*, or by writing, or by experimental work in order to obtain evidence as to the knowledge of the subject possessed by the candidates.

One day *at least* will be devoted to a practical examination in the special subject offered by the candidate under Paper IV.

A thorough command of the methods, instruments and apparatus utilized in chemical work will be demanded and special familiarity with those used in connection with the special subject which the candidate offers.

R. 119.

(4).—BOTANY.

(Three Papers and at least three days' Practical Examination.)

A candidate will be expected to show a general knowledge of Botany in all its branches. In addition he shall furnish evidence of having been engaged on some special subject or branch of Botany which he shall specify by notice in writing to the Registrar on or before the 14th of February. He may submit a thesis, a series of preparations or any other evidence of his work, and the Examiners shall take such evidence into consideration in assigning him marks at the examination.

The practical examination will occupy at least three days. Examiners are at liberty to apply any test they think desirable, either *viva voce*, by writing, or by experimental work, in order to obtain evidence as to the knowledge the candidate possesses.

A thorough command of the methods, instruments and apparatus utilized in botanical work will be demanded and a special familiarity

with those used in connection with the special subject which the candidate offers.

R. 120.

(5).—ZOOLOGY.

(Three Papers and at least three days' Practical Examination.)

A candidate will be expected to show a general knowledge of Zoology in all its branches. In addition, he shall furnish evidence of having been engaged on some special subject or branch of Zoology which he shall specify by notice in writing to the Registrar on or before the 14th of February. He may submit a thesis, a series of preparations or any other evidence of his work, and the Examiners shall take such evidence into consideration in assigning him marks at the examination.

R. 121.

(6).—GEOLOGY.

(Three Papers and at least three days' Practical Examination.)

The examination for the degree will consist of a searching test in the whole subject as prescribed for the B.Sc., much more fully treated. The student shall specialise besides in any one of the branches (*a*) to (*f*) or any restricted portion of any branch approved by the Board of Studies.

BACHELOR OF AGRICULTURE.

GENERAL.

O. 228.

A candidate for the Degree of Bachelor of Agriculture must produce a certificate, signed by the Principal of an affiliated Arts College, to the effect that he has satisfactorily carried out at such College the work appointed by the University for the first year after Matriculation, or must have passed an examination in a recognized University which is accepted as equivalent to the First Year Arts Certificate Examination held by a College affiliated to this University.

O. 229.

A candidate will be required to pass two examinations, *viz.*, the Intermediate Examination in Agriculture*, and the Examination for the Degree of Bachelor of Agriculture.

CHAPTER XIII.—INTERMEDIATE EXAMINATION IN AGRICULTURE.

Admission.

O. 230.

No candidate will be admitted to this examination unless he produces satisfactory testimonials of having, subsequent to his receiving the certificate from the Principal of an affiliated Arts College referred to in Ordinance 228, or subsequent to his passing an examination recognized by the University of Bombay as equivalent to the First Year Arts Certificate Examination of a College affiliated to it, kept two terms in a College recognized in Agriculture by this University.

R. 122.

The Candidates will be examined in the following subjects:—

(1).—Agriculture (including Geology).

* A student who has passed the B.Sc. Examination of this University with Chemistry and Botany as the subjects for that examination will be excused the Intermediate Examination in Agriculture.

(2).—Chemistry.

(3).—Botany.

(4).—Mathematics and Elementary Physics.

R. 123.

On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 124.

(1).—AGRICULTURE (INCLUDING GEOLOGY).

(Two Papers and a Practical Examination.)

FIRST PAPER.

1. Importance and scope of Agriculture and its relations to other industries and sciences.

2. Tillage operations :—

Ploughing, harrowing, levelling, rolling, cultivating. General effects of tillage operations. Tillage operations for light and heavy soils.

3. Tillage implements, their construction, adjustment, working, action, cost and care :—

General study of ploughs, harrows, levellers, seed drills, cultivators and hand tools—indigenous and introduced—their construction, adjustment, working, action, cost and care.

4. Origin and formation of soils :—

(a) The earth's crust, its present condition and composition.

(b) Soil forming minerals and rocks, their formation, classification and relation to soils.

(c) Rocks and minerals of the Bombay Presidency.

(d) Rock weathering ; soil formation.

(e) Geological classification of soils and the relation of Geological formation to soils of India in general and Bombay Presidency in particular.

(f) Climate and its effect on the character of soils.

5. Agricultural classification of soils of the Bombay Presidency.

SECOND PAPER.

I. Plants as productive agents :—

Plants and the purposes for which they are grown.

Germination of seeds and its requirements.

Practical methods of plant propagation. Necessities for vigorous plant growth.

2. Routine of cultivation, as illustrated by the study of the major crops of the Bombay Presidency :—

General study and observation of the routine of field work, such as preparation of seed bed, sowing, after-care, harvesting and threshing the following crops :—

Cotton, Jowar, Bajri, Maize, Wheat, Rice, Groundnut, Gram, Tobacco and Potato.

3. Cattle and their importance.

4. Breeds of cattle :—

Description and distribution of the following breeds :—

Cows—Gir, Sindhi, Kankrej, Krishnavalley, Amrit Mahal.

Buffaloes—Jaffrabadi, Surati and Delhi.

Practical Examination.

Notes of the practical work done by each candidate during the course are to be recorded in a note-book, which must be attested by the Principal of the College and presented to the Examiners. The candidates shall be examined orally or practically on the work recorded in their note-books.

1. (a) Recognition of rocks, minerals and classes of soils of the Bombay Presidency.

(b) Recognition of crops studied in all stages, their earheads and seeds.

(c) Recognition of breeds studied.

2. Practical use of tillage implements.

3. Practical work in carpentry and smithy as required for the ordinary repairs of agricultural implements.

No University examination will be held under (3), but each candidate should have carried out exercises to give him sufficient practice to carry out ordinary repairs and fit up agricultural implements. Each candidate must have attended twenty periods in the year, and the Principal must certify that the candidate has taken the necessary practice and attended the specified periods during the year. The Principal's certificate must be attached to the first year University form.

R. 125.

(2).—CHEMISTRY.

(Two Papers and a Practical Examination.)

FIRST PAPER.

1. *Chemical changes and Chemical measurements.*

2. *Constitution of Matter.*

Atoms and molecules, symbols, formulæ, equations, Atomic Hypothesis, Laws of Chemical Combination.

3. *General Laws of Gases.*

Avogadro's Hypothesis. Determination of density of gases and vapours. Gas mixtures. Diffusion of gases,

4. *Classification of Elements.*5. *Principal non-metals and their compounds.*

Hydrogen : preparation and properties.

Oxygen : preparation and properties. Oxides, their formation and classification. Acids, bases, and salts.

Oxidation and Reduction.

Water : electrolysis, synthesis, solution, crystallization, water of crystallization. Efflorescence and deliquescence. Natural waters. Temporary and permanent hardness. Methods for softening on a large scale.

Nitrogen : Ammonia. Oxides of Nitrogen. Nitric acid and the Nitrates.

Atmosphere : Ventilation.

Carbon : Varieties of carbon. Carbon dioxide and the carbonates ; Carbon monoxide.

Combustion : Flame ; safety lamp.

Chlorine, Bromine, Iodine ; Hydrochloric acid and the chlorides.

Hydrobromic and Hydriodic acids. The family of the halogen elements.

Sulphur : sulphur dioxide and sulphur trioxide.

Sulphuric acid and sulphates, sulphuretted hydrogen and the sulphides.

Carbon bisulphide.

The Oxygen-sulphur family.

Phosphorus : Phosphorus pentoxide. Phosphoric acid, and the phosphates.

The Nitrogen-phosphorus family.

Arsenic and arsenious oxide.

Silicon : Silica and silicates.

SECOND PAPER.

1. *Principal metals and their compounds.*—The following metals should be studied :—Sodium, Potassium, (Ammonium), Calcium, Barium, Aluminium, Iron, Lead, Copper, Mercury, Manganese, Zinc, Magnesium.

2. *The simpler carbon compounds and their classification.*—Carbon compounds : their general composition, physical properties, general classification. Compound radicals, closed and open carbon chains, saturated and unsaturated compounds.

Isomerism, metamerism, polymerism.

Hydrocarbons : Methane, ethane, ethylene and acetylene. Ethyl chloride, ethyl bromide, ethyl iodide, chloroform, iodoform.

Alcohols : methyl and ethyl alcohols. Glycerine. Ethyl ether.

Aldehydes and ketones : Formaldehyde, acetaldehyde, acetone.

Acids : Formic, acetic, palmitic, stearic, oleic, oxalic, lactic, tartaric, citric, and malic. Fats and oils, soap

Carbohydrates : Cane sugar, dextrose, lævulose, lactose, starch, cellulose.

Acetamide, Urea.

Cyanogen compounds : Cyanogen, hydrocyanic acid, and potassium cyanide.

Aromatic compounds : Benzene, nitrobenzene, aniline, ordinary phenol, benzaldehyde, benzoic acid.

Practical Chemistry.

Notes of the practical work done by each candidate during the course are to be recorded in a note-book, which must be attested by the Principal of the College, and presented to the Examiners. The candidates shall be examined orally or practically on the work recorded in their note-books.

A series of experiments will be prescribed by the Academic Council, on the recommendation of the Board of Studies, dealing with the principles of Chemistry as contained in the course, which must have been done by each candidate.

R. 126.

(3).—BOTANY.

(One Paper and a Practical Examination.)

1.—*Elementary Morphology of Plants.*

Seeds.—Their structure and germination.

Root.—Primary and secondary, tap and adventitious roots, their forms, root hairs.

Stem and Shoots.—Buds and their structure, parts of a shoot, forms of shoots and stems, their branching.

Leaf.—Parts, varieties, forms of leaves, phyllotaxis, outlines, venation, base and tip, margin.

Flower.—Parts of a flower and their arrangement, symmetry, number of floral parts and variations of these. Forms of floral parts, placentation.

Inflorescence.—Racemose, and cymose and mixed inflorescences.

Fruits.—Dry and succulent, dehiscent and indehiscent; seeds and seed dispersal.

2.—*Elementary Anatomy and Cytology of Plants.*

The Cell.—The typical plant cell and its modifications, cell division.

Tissues.—Tissue systems; their structure and functions.

Special Parts.—Anatomy of normal roots, stems, leaves, anther, ovule.

3.—*Elementary Physiology of Plants.*

Nutrition.—Food of plants, and its absorption; osmosis, root pressure; photosynthesis; translocation and storage of food, transpiration.

Growth.—Conditions influencing growth, growing regions in plants.

Metabolism.—Respiration, enzymes and digestion of reserve foods; the cycle of plant energy.

Response.—To various stimuli.

Reproduction.—Vegetative. Asexual and sexual; the process of fertilization and the development of the zygote; self and cross fertilization in flowering plants.

4.—*Classification of Plants.*

Principles underlying modern classification. A knowledge of the general characters of the following natural orders with examples drawn from economic plants :—

Gramineæ, Scitamineæ, Palmeæ, Malvaceæ, Cruciferae, Leguminosæ, Solanaceæ, Compositæ, Rutaceæ, Cucurbitaceæ, Cactacæ, Euphorbiaceæ.

General characters of groups of Gymnosperms, Ferns, Mosses, Algae and Fungi with particular reference to the evolution of the plant as an organism adapted to live on land.

Practical Examination.

Notes of the practical work done by each candidate during the course are to be recorded in a note-book, which must be attested by the Principal of the College and presented to the Examiners.

The recognition, dissection, microscopic examination, drawing and description of plants. The student will be expected to make hand sections of plants, but will not be expected to use a microtome.

R. 127.

(4).—MATHEMATICS AND ELEMENTARY PHYSICS.

(One Paper and Practical Examination.)

1.—*Elementary Mensuration of Surfaces and Solids.*

Areas of plane surfaces applied to the measurement of land. Volumes of solids, regular and irregular, applied to the measurement of stacks, sheds, heaps, and the like. Capacities of tanks, ponds and wells. Finding out the quantities and cost of different items of construction. Preparation of graphs, etc., of the problems arising on the farm.

2.—*Elementary Mechanics.*

The measurement of length, area, volume, time, force, weight, pressure, tension.

Velocity, uniform and variable. Acceleration of a particle moving in a straight line.

Newton's laws of motion. Derivation of unit of force. Graphical representation of a force.

Motion of a particle in a straight line under the action of a force in that line and in a vertical plane under the action of gravity.

Composition and resolution of forces. Moment of a force. Parallel forces. Couples.

Conditions of the equilibrium of a body under three concurrent forces and under parallel forces.

The motion of a simple pendulum. Determination of "g". (Only experimental proofs are required in this case.)

Definition of work. Units of work, absolute and gravitational. Graphical representation of work done by force.

Power, Energy, Potential and Kinetic.

Simple machines, including lever, pulley, wheel and axle, inclined plane, wedge and screw.

The balance. The different weighing machines.

Statical friction. Limiting angle of repose.

Gravitational attraction. Law of inverse squares.

Centre of gravity. Stable, unstable and neutral equilibrium.

3.—*Properties of Solids, Liquids and Gases.*

The different states of matter.

Solids.—Properties and structure. Young's Modulus for a stretched wire.

Liquids.—General properties.

Pressure exerted by a fluid. Pressure at a point in a fluid, transmissibility of pressure. Resultant thrust in simple cases. Principle of Archimedes, floating bodies, metacentre, hydrometers.

Applications to practical determination of density and specific gravity.

Equilibrium of a liquid at rest. Level of liquid surface in communicating vessels. Artesian wells, water level, spirit level.

Hydrostatic machines.

Solution, diffusion, osmosis, capillarity.

Gases.—General Properties.

The pressure of the atmosphere. The mercury and aneroid barometers. Barometric corrections. Compressed air manometer. Bourdon's steam gauge.

Isobars, cyclones and anticyclones.

Water pumps and air pumps. Siphon.

4.—*Elementary Heat.*

Temperature. Its measurement. The thermometric scales. The construction and graduation of thermometers. The determination of the fixed points of a thermometer. Maximum and minimum thermometer. The thermal expansion of solids, liquids and gases.

Coefficient of linear expansion of solids, coefficient of expansion of liquids, real and apparent.

Expansion of gases at constant pressure and at constant volume. Charles' law. Absolute zero. Air thermometer.

Quantity of heat. Unit of heat. Specific heat. Measurement of specific heat by method of mixtures.

Melting point. Latent heat of fusion. Bunsen's ice calorimeter. Boiling point. Latent heat of vaporisation.

Vapour pressure. Dew-point. Evaporation.

Hygrometers. Dry and wet bulb thermometers.

Conduction, radiation, convection.

Absorption and reflection.

Transformation of the heat energy into mechanical energy.

Determination of the mechanical equivalent of heat by Joule's method.

Cooling by expansion of gases and heating by compression. Production of clouds.

5.—*Factors which make climate and their determination.*

General study of the atmosphere, its temperature, circulation and humidity.

Monsoon, Rain. Its measurement and distribution. The influence of geographical position, forests, deserts, sea, mountains, etc. upon it.

Practical Examination.

A series of elementary experiments designed to illustrate the subject as treated in the theoretical course will be prescribed by the Academic Council on the recommendation of the Board of Studies.

Notes of work done by each candidate are to be recorded in a laboratory note-book, which must be attested by the Principal of the College and presented to the Examiners and each candidate is to be examined practically on the work done by him in the laboratory, as shown in his journal which shall be taken into account by the Examiners in assigning marks.

Practical Work.

(Twenty exercises to be worked during the year.)

1. Construction of vernier scales for measurement of lengths.
2. Measurement of metal sheets, wires and other regular solids with vernier callipers.
3. The same measurements with screw micrometers.
4. The use of Spherometer.
5. Calculations of volumes by measurements, weighing and determination of densities.
6. Density of a solid by weighing and displacement of water.
7. Specific gravity of solids with hydrostatic balance.
8. Do. liquids with hydrostatic balance.
9. Do. solids with specific gravity bottle.
10. Do. liquids with specific gravity bottle.
11. Do. solids with Nicholson's hydrometer.
12. Do. liquids with Nicholson's hydrometer.
13. Do. liquids with variable immersion hydrometers.
14. Jolly spring balance. Construction of curve showing relation between stretching and weight and its use in finding out the specific gravity of substances.

15. Simple pendulum. Verification of simple laws.
16. Measurement of the energy required to raise a body a certain distance by means of different combinations of pulleys.
17. The same by means of wheel and axle.
18. Efficiency of an Inclined Plane.
19. Friction laws for statical friction with a friction board.
20. Solubility of different substances.
21. Capillarity with tubes.
22. Capillarity with plates.
23. Boyle's law.
24. Specific heat by the method of mixtures.
25. Latent heat of fusion of ice.
26. Latent heat of vaporisation.
27. Observations of temperature, air pressure and humidity.
28. Hygrometers.
29. Siphon.

Standard for Passing the Examination.

R. 128. All candidates for the Intermediate Examination in Agriculture must obtain, in order to pass, forty per cent. of the total number of marks obtainable and thirty-three per cent. of the number obtainable in the papers in each subject and in each practical examination. Candidates who obtain sixty per cent. of the total will be placed in the First Class.

R. 129. A candidate who has obtained forty-four per cent. of the total marks in any subject (including the practical) at any one examination may, at his option, be excused from appearing in that subject (provided he has obtained the minima in the papers and in the practical of that subject as required by Regulation 128) at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination: Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper or subject or practical together with the percentage of the total marks in such subject or subjects required by Regulation 128. Candidates passing the examination in this manner in compartments will not be eligible for a class or any prize or scholarship to be awarded at the examination.

R. 130. Candidates who fall short of the minimum required to pass under one head only by not more than three per cent. and who obtain an aggregate of at least fifty per cent. of the total marks obtainable shall, on the recommendation of a majority of not less than two-thirds of the Examiners present at the final meeting, be declared to have passed the examination.

CHAPTER XIV.—EXAMINATION FOR THE DEGREE OF
BACHELOR OF AGRICULTURE.

Admission.

O. 231. No candidate will be admitted to this examination unless he has kept four terms in a school or college recognized in Agriculture by the

University of Bombay, subsequent to passing the Intermediate Examination in Agriculture, or subsequent to passing the B.Sc. Examination of the Bombay University with Chemistry and Botany as the subjects of the examination.

O. 232. A student who has passed in all subjects but one at the Intermediate Examination in Agriculture in conformity with Regulation 129 of that examination will be allowed to keep terms and appear for the B.Ag. Examination after keeping four terms, but will not be declared to have passed the B.Ag. Examination under any circumstances unless he has passed in the remaining subject of the Intermediate Examination held either in a previous, or in the same examination, season.

R. 131. Candidates will be examined in the following subjects :—

- (1). Agriculture.
- (2). Chemistry of Agriculture.
- (3). Agricultural Botany.
- (4). Plant Pathology.
- (5). Agricultural Engineering.
- (6). One of the following optional subjects :—
 - (A). Intensive Study of Certain Crops.
 - (B). Advanced Plant Breeding.
 - (C). Advanced Agricultural Chemistry.
 - (D). Advanced Animal Husbandry and Dairying.
 - (E). Advanced Agricultural Economics.
 - (F). Advanced Horticulture.
 - (G). Advanced Plant Pathology.

R. 132. The examination in subjects (3) and (4) may be taken at the end of the second year, or at the end of the third year of the Agricultural course at the students' option. Candidates who pass in either one or both of these subjects at the end of the second or third year of the course will be allowed exemption at a subsequent examination from the subject or subjects in which they have passed.

R. 133. On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 134.

(1).—AGRICULTURE.

(Four Papers and Two Practical Examinations.)

FIRST PAPER.

General Agriculture—I.

1. The study of the soil : physical, chemical and biological.
Physical :—

A.—Composition of soils.

B.—Classification of soils according to texture, and their characters.

C.—Physical properties of soils.

(a) Texture as determined by the mechanical analysis of soil.

(b) Structure—plasticity, cohesion, granulation, tilth.

(c) Colloids affecting soil properties.

(d) Absolute and apparent specific gravity, pore space and weight of soils.

(e) Surface of the soil particles, the absorptive and retentive properties of soils for water and soluble manurial salts.

D.—Soil water—types and source, control and its importance to plant growth.

E.—Organic matter—source and function.

F.—Soil heat.

G.—Soil air.

H.—Control of physical properties, utility of mechanical analysis to the farmer.

Chemical :—

I.—Soil as source of plant-food ingredients, average proportion of valuable ingredients in soil, utility of chemical analysis to the farmer, injurious substances in soils, their origin and methods of removal.

Biological :—

J.—Soil from Bacteriological point of view :—

Nature of organisms in soils, putrefaction and fermentation, nitrification, denitrification, nitrogen fixation. Relation of various bacterial processes to soil fertility. Action of heat and antiseptics on soils.

2. Soil management :—

A.—General effects of tillage operations, essential differences in tillage for different types of soils, climates and crops.

B.—Preparation of seed bed, sowing methods, transplanting and spacing. Principles underlying these methods.

C.—Other farming methods, *viz.*, rotations, fallows, mixtures and principles underlying them. Importance of leguminous crops in farming.

D.—Fertility and how to maintain and build it up. Indications of soil fertility. Infertility of soils and its causes.

E.—Troublesome weeds, their habit of growth, their effects on crops and soils and methods of their eradication.

3. Manures :—

A.—Definition of manure, substances essential for plant growth, how they are obtained and how they increase productiveness.

B.—Farm yard manure, leaf manures, their sources and supply, conservation and preservation. Fish and Rab as manure, sewage and night soil, green manuring and sheep folding. Fertilisers. Composition of manures and their cost. How to find unit values.

C.—Principles underlying manuring of crops and methods of application.

4. Irrigation and drainage :—

Necessity of irrigation. Sources of irrigation water, water lifts, soil suitable for irrigation, water requirements of crops, methods and cost of irrigation, management of irrigated lands. Advantages of different systems of irrigation. Conditions requiring drainage, objects of drainage. Soil drainage and factors affecting it. Composition of drainage waters.

SECOND PAPER.

General Agriculture—II.

1. Field and garden crops, their classification, distribution, characters, methods of growing, methods of harvesting, costs, profits and utilisation, including preparation for market. General consideration of plantation crops.

2. Improvement of field and garden crops, methods and results. Improvements by—

A.—Better implements, better cultural and manurial methods.

B.—Seed selection and breeding, introduction of new varieties, etc.

C.—Rotation methods.

D.—Live stock keeping on the farm.

E.—Controlling diseases and pests, seed treatment, etc.

F.—Land development.

General study of improvement brought about in India.

3. Methods of crop investigation :—

Principles underlying experimental work in field. Planning experimental work for crop improvement and interpretation of results.

4. Agricultural climatology :—

Factors which determine climate, determination of these factors. General circulation of atmosphere. Monsoon. Precipitation and influence of geographical position, forests, desert, seas, mountains, etc., upon it.

Temperature and the influence of latitude, altitude, forests, seas, deserts, mountains, etc., upon it. General ideas and knowledge of weather forecasting.

Relation of climate to nature of crops and kind of farming with special application of the principles to each Indian Province and to each part of the Bombay Presidency.

Famines, their relationship to climate in general and in India.

THIRD PAPER.

Animal Husbandry and Dairying.

1. Anatomy and physiology of common farm live stock.

2. Breeds of Indian cows, buffaloes, horses, sheep, goats and poultry. Their characters, merits and defects.

3. Foreign breeds of cows, sheep, goats and poultry. Their characters and utility in India.

General elementary review.

4. Management and feeding of live stock :—

A.—Cattle foods available in India and their relative value for milch and work cattle.

B.—Feed nutrients, their digestion, absorption and use in animal body.

A study of requirements for maintenance, growth, work and milk production and factors affecting the same.

Rations—Feeding standards.

C.—Rearing of young stock, feeding and care of cattle for milk and work purposes. Care of pregnant animals and breeding bulls.

D.—Housing of live stock in India, arrangement of buildings.

5. The principles of live stock breeding :—

Outlines of the principles and methods of animal breeding for improvement of live stock.

6. Fodder and fodder storage :—

Fodder crops, seasons, growth, yield, cost, etc. Different methods and cost of storing fodders. Effect of storage on nutritive value of fodder.

Methods of conserving fodder.

7. Grass, its management and value :—

Important pasture and hay grasses, their value for grazing and for hay.

Grass seeds. Management of grass land, judicious grazing. Hay and hay making ; how maximum yield obtained ; methods commonly practised. Effect of early or late cutting on the nutritive value of hay. Best time to cut, cost of hay making.

8. The recognition and treatment of common diseases of farm animals and recognition of serious diseases :—

Signs of health and disease, simple surgery. Treatment of simple wounds as contusions, goring wounds. Treatment of tumours, abscesses and sores. Treatment of lameness. Common parasites, parasitic diseases. Diagnosis and treatment of common diseases in cattle. Diagnosis and the principles of treatment of the more deadly form of infectious diseases.

A knowledge of drugs easily available in local bazars and such other drugs as are in daily veterinary practice. The drugs should be limited to those in use in treating common diseases of cattle.

Simple obstetrics, including the more common forms of abnormal parturition. Treatment of the diseases of parturition.

Castration—Principles and practices.

Poisons and poisonous plants, symptoms of common poisoning and their treatment.

Shoeing of animals—Principles and practices.

9. Dairying and dairy farming :—

A.—Composition and secretion of milk.

Factors affecting quality and quantity of milk.

The relation of bacteria to dairy work.

Principles of creaming, common separators, whole milk churning, cream churning and butter making, ghee making. Proper methods of handling milk and cream and the relation of market milk to public health.

B.—Systems of dairy farming ; conditions influencing choice of system. Selection of a dairy farm.

Building suitable for a dairy farm.

Dairy breeds of India, their adaptability to different tracts and to special purposes.

FOURTH PAPER.

Agricultural Economics and Farm Management.

1. Farm accounts :—

Systems of farm record. Farm accounts and farm book-keeping. Determination of profit.

2. Land tenures and land holdings :—

The more important systems of land tenure, their nature, advantages and disadvantages. Systems adopted in the Bombay Presidency. Systems of Tenancy. Principles of land classification and settlement in the Bombay Presidency. Bombay Land Revenue Code—Chapters V to XI—as far as they affect the rights of the landholder.

Land as a factor of production. Size of holding and its effect on farming.

3. Farming capital :—

Capital as a factor of production on a farm. Forms of capital. Different sources of supply of farm capital. Government, Co-operative Institutions, and other agencies ; advantages and disadvantages of each source. Cost of farm capital. The equipment of a farm.

4. Farm labour :—

Labour as a factor of production in farming. Human labour and animal labour. Replacement of labour by power. Supply, efficiency and cost of farm labour.

5. Farm management :—

Selection of farms. Cropping schemes and yearly management of typical farms of different types and sizes. Tables of expenditure and receipts. Farm profits or losses. Management of farms by peasant owners, by tenants, and by land-owners cultivating by hired labour.

6. Marketing and prices :—

Value of farm products, and prices obtained for them. Supply and demand, their effect on prices.

Different methods of buying farm requirements and selling farm produce including co-operative methods ; their advantages and disadvantages.

Practical Examinations.

Each candidate must have performed a series of elementary experiments in soil Physics to illustrate the theoretical course to be recorded in a note-book which should be presented to the Examiners duly attested by the Principal.

Each candidate must have cultivated in a satisfactory manner during one year, with his own hands, a plot at least one-tenth of an acre in size with two crops and must present a regular diary of work and weekly observations on the crops so cultivated, with the necessary remarks and marks on the student's work by the teacher at least once in each term, and certified by the Principal to that effect.

Each candidate must have managed in a satisfactory manner during one year a plot of at least one acre in extent and must present duly filled cultivation and labour sheets, balance sheets and diary of operations, with a certificate signed by the Principal of the College to that effect.

Each candidate must have, during his third year, taken an agricultural tour in the Bombay Presidency, and the notes taken in connection therewith must be presented to the Examiners.

The whole of the practical work done by each student during the four terms must be recorded in note-books which must be attested by the Principal of the College and presented to the Examiners. In all cases candidates shall be examined orally or practically on the work recorded in their note-books.

One hundred marks, *i. e.*, one third of the total practical marks shall be set apart for the plot work done during two years and presented as plot records and diaries maintained by the candidate. The Examiners shall give due consideration to the remarks by the teacher and marks allotted to the students' work. They shall examine the students orally, if necessary, in allotting the marks on the plot work.

First Practical Examination.

Recognition of classes of soils, manures and crops, important weeds and grasses, ability to recognize good seed and good plants for seed production.

Steeping seeds, preparing seeds for sowing. Ability to do all the farm operations in the cultivation of crops, preparation of crops for market, working of the different contrivances for raising water, laying out fields for irrigation, judging and valuing crops, grading farm products. Selection of implements for different conditions and purposes.

Practical control of crop pests and diseases.

Second Practical Examination.

1. Determination of breeds of agricultural animals. Detection of merits and defects of individual animals. Judging cattle.

2. Handling of farm animals, recognition of their parts. Throwing of animals. Determination of age.

3. Recognition of Indian feeds for cattle. Feeding cattle and poultry. Making of rations.

4. Milking of animals, separating milk, detecting common adulterations in milk and ghee.

5. Treatment of sick animals, including the use of the clinical thermometer, taking pulse, bandaging, dressing wounds, dieting, application of ointment and liniments. Diagnosis and treatment of common diseases. Prevention and control of infectious diseases.

6. Materia medica. Common drugs and their use.

R. 135.

(2).—CHEMISTRY OF AGRICULTURE.

(One Paper and a Practical Examination.)

1. The Soil.—Origin of soils. Mineral constituents of soils. Plant food constituents, potential and available. Injurious salts, alkali lands.

Organic matter in the soils, its nature and use. Acid soils.

The living organisms of the soil, decay and humification.

Fixation of Nitrogen. Nitrification and De-nitrification.

Soil water and soil gases. Physical nature of soils.

Classification of soils. Analysis of soils and the interpretation of the results. Amelioration of soils.

2. Manures and Fertilisers.—Manures of organic origin, chemical changes produced in them during their preservation and when put on to the soil. Artificial and mineral manures and their use. Analysis of manures and their interpretation.

3. Plant Chemistry.—Proximate and ultimate constituents of plants.

Chemical composition of crop plants. Assimilation of food, its products and their transformations and transportation. Chemical changes during germination.

Methods of Analysis of plant material.

4. Chemistry of animal nutrition and food-stuffs.—The chief constituents of the animal body. Digestion and assimilation of food. Relative value of food constituents to repair loss. Adaptation of food to the requirements of animals under different conditions of life. Relation of food to manure. Analysis of food-stuffs.

5. Dairy Chemistry.—Constituents of milk and their relative amounts. Composition of dairy products, and changes produced in these products and interpretation of the results.

Practical.

Soils.—Mechanical analysis by sedimentation. Detection of salts or alkalies in soils.

Manures.—Examination of manures for valuable ingredients. Determination of nitrogen, phosphoric acid, potash and lime.

Water analysis.—For irrigation purposes.

Carbohydrates.—Demonstration of the chief properties. Proof of their presence in the vegetable kingdom.

Oils.—Chief characteristics.—Determination of percentage of oil in agricultural products.

Proteids.—Preparation and properties of wheat gluten, egg albumen, and milk casein.

Feeding stuffs.—Proof of the presence of chief constituents. Determination of fat, nitrogen, ash, and fibre.

Milk.—Use of lactometer. Determination of fat and total solids. Proof of the presence of chief constituents. Examination of butter. Determination of the percentage of water.

R. 136. (3).—AGRICULTURAL BOTANY AND HORTICULTURE.

(One Paper and a Practical Examination.)

1. Plant morphology : physiology, anatomy, classification, under the aspects of general ecology of trees, grasses, crop plants and weeds.

Plant habits and the constituent factors, morphological and physiological responses to them. Distribution of vegetation on the earth, types of vegetation. Ecology of farm crops.

2. Seed testing.—Germination, useful percentage. Common and harmful weed seeds.

3. Principles of fruit growing.

4. Principal horticultural operations : Pruning, root pruning, root exposure, propagation, etc., and the physiological principles underlying them.

5. The general treatment of the commoner fruit trees (Mango, Banana, Citrus, Pomegranate, Grape, Guava, Fig).

6. The general principles of plant breeding : Outlines of theories and principles of variation, selection, hybridization.

Outlines of the theories of evolution and their relation to the principles and practice of plant breeding.

Practical Examination.

The work done by each candidate in the College laboratory must be recorded in a laboratory note-book, which must be attested by the Principal of the College. Candidates may be examined orally or practically on the work recorded in their note-books.

Description and identification of plants or parts of plants of agricultural importance.

The operations of horticulture, including propagation, grafting, budding, pruning and transplanting.

The recognition and testing of seed samples.

Elementary exercises in plant-breeding technique.

R. 137. (4).—PLANT PATHOLOGY.

(One Paper and a Practical Examination.)

General.—Nature of health and disease. Symptoms of disease and causes of disease. Epidemics and the factors producing them. Principles of disease control.

1. Plant diseases not caused by parasitic plants or animals.—

(i) Diseases due to unfavourable soil and atmospheric and climatic conditions.

(ii) Physiological diseases like albinism, gummosis, mosaic.

2. Plant diseases caused by animals.—Classes of animals attacking plants. Vertebrate animals (Pigs, rats, and other vermin, etc.) and the damage they do. Crustacea (crabs) and other invertebrates attacking plants. Eelworms, insects and allied forms of life. Structure of caterpillar and the chief types of winged insects. Metamorphosis of insects, life-history of insects, chief characters of the principal orders of insects. Food of insects and method of feeding.

How insects and similar animals become injurious. Natural checks. Influence of climate on the life of insects. General methods of control—agricultural, mechanical, insecticidal. Pests of the chief crops of Western India, their life-history and control.

Insects attacking stored products and their control.

3. Plant diseases caused by common vegetable parasites, fungoid and non-fungoid, studied under the following headings :—

- (1) Symptoms.
- (2) Causal organism.
- (3) Etiology of the disease.
- (4) Preventive and remedial measures.

Practical Examination.

The candidates must present to the Examiners a collection of injurious insects made and also a note-book containing an account of the practical work, done in connection with this course, both collection and note-book being attested by the teacher in charge. Candidates may be examined orally or practically on the work recorded in their note-books.

Identification of insect pests in the field by the nature of their damage to crops. Recognition of insects of agricultural importance.

Recognition of plant diseases in the field caused by fungoid and non-fungoid plants. The practical application of remedial measures against plant pests and plant diseases including a knowledge of the construction of the apparatus used and of the composition of chemical remedies.

R. 138.

(5).—AGRICULTURAL ENGINEERING.

(One Paper and a Practical Examination.)

(i)—Elementary Surveying and Levelling :—

Sufficient for Agricultural Works, such as farm roads, channels, pumps and pipe lines, levelling and bunding, drainage and survey of farms.

Survey.—Construction of scales. Representative fraction. Surveying by the chain only. The use of cross staff, optical square, prismatic compass, plane table, fieldbook. Method of plotting surveys. Reading maps and plans.

Levelling.—Simple levels, Dumpy and farmer's levels, and their adjustments. Levelling fieldbooks, Benchmarks. Plotting the work. Contours, sections, and cross-sections.

(ii)—Elementary Hydraulics :—

Sufficient for small channels and discharges.

Fluid friction. Flow of water through orifices and sluices.

Flow of water through pipes and channels.

Measurement of water through channels and over weirs.

Rectangular and V notches and Cippoletti weirs.

General principles of water wheel, hydraulic ram, Archimedian Screw, Mhot.

Persian wheel, picotah, centrifugal pump and chain pump—their capacity and cost of working.

(iii)—Irrigation :—

Sources of water. General principles of well irrigation. Small pick up weirs on *Nalas*. Selection of site. Construction of bank. Waste weir. Calculations of contents of small storage tank. Run off from catchment and estimation of supply available. Regulation and duty of water. Irrigation programme and rotation statements. Small irrigation channels. Alignment section and gradient.

(iv)—Land Drainage :—

Relation of irrigation to drainage. Methods of drainage and their effect on soil moisture. Surveying and plotting. Their construction and cost. Water logging and its remedy. Salt lands. Their improvement.

(v)—Farm Buildings and Land Development :—

Simple farm and dairy Structures. Their rough cost, dimensions and general details. General knowledge of farm roads. Fencing wells and boring. Embankments. Conditions suitable for land development. Levelling. Embanking, Terracing, Silt catching. Their design, Construction and cost.

(vi)—Implements and Machinery suitable for large scale farming :—

Oil Engines :—General principles of engine. *Otto* and two stroke cycle types. Setting of valves, ignition simply treated. Vaporisation and carburation by different methods. Silencing exhaust. Cooling of engines. Care and running of oil engines. Efficiency and power of the engine.

Tractors.—General principles. Different types. Methods of ploughing. Cost.

Implements.—Implements for the preparation of soil, tillage, planting and harvesting crops. Threshing and winnowing machinery, chaff-cutters, sugarcane crushers and machinery for the preparation of food. Dairy machinery. Sprayers and dusting machines.

(vii)—Transmission of power for farm use :—

Different methods of transmitting power and their application. Pulleys and belting. Size and its care. Belt joints. Toothed gearing. Calculations for size. Velocity ratio. Shafting and bearings. Lubrication.

Practical Examination.

Each candidate must have conducted, with others, the survey of agricultural land, and run a line of levels for a road or water channel,

and have laid out experimental plots and gradients for irrigation channels. A plotted survey and section with the survey book and level book (certified as the work of the student by the Principal of the College) must be submitted to the Examiners, who will take them into consideration in allotting marks for the practical examination.

Each candidate must present sketch drawings, certified as his own work by the Principal of the College as follows:—

1. Design and drawing for very simple farm buildings.
2. Drawings of important parts of implements and farm machinery showing working arrangement, gears, transmission, etc.
3. Arrangement of transmission of power by manual and animal labour.

The practical examination will consist in testing the familiarity of the student with toothed gearing, velocity ratio, mechanical advantage. Proportion of belt drivers. Lining out for simple farm buildings. Fixing fence posts. Working oil engine. Working out different velocity ratio for implements. Laying out profiles for bunds and water-channels.

R. 139.

(6).—OPTIONAL SUBJECT.

(One Paper and a Practical Examination.)

(A).—**Intensive Study of Certain Crops.**

This examination will require a full and detailed study of the growing and marketing of one of the following groups of crops:—

Group I.—Dry crops, including dry farming generally. This group will include a detailed study of cotton.

Group II.—Rice, and the alternative and additional crops grown in rice regions.

Group III.—Irrigation crops, including sugarcane and its alternatives and market gardening.

Practical Examination.

Each candidate must have resided in an area where the class of crops he is especially studying are grown, and must have himself grown the class of crops, from the beginning to the end and must present a certificate to this effect from the Principal of the College.

In the practical examination he will be expected to be fully conversant with the crops in his special groups and in the methods of growing them.

(B).—**Advanced Plant Breeding.**

The object of this course is to give a thorough and up-to-date knowledge of the principles and practice of plant breeding.

1. Variation.—Fluctuating variations, their causes, their heritability, their measurements, curves of variation and their use. Uses of variations in breeding. Selection and fixing of variations, pure lines.

2. Correlations : Correlations, their use in breeding. Association of characters.

3. Mutations : Their heritability, causes, use, distinction from ordinary variations, history of some mutations, theory of their production.

4. Inheritance : Mendelian, non-Mendelian, inheritance of acquired characters; mechanism of inheritance through chromosomes.

5. Hybridization : Theory and practice of selfing and crossing, graft hybrids, chimeras, work of Mendel and his followers. Factor hypothesis. Presence and absence hypothesis. Linkage and crossing over.

6. Plant Breeding Technique : Emasculation of flowers of crop plants. Purity of selfing and crossing. Use of apparatus (lenses, dissecting microscopes, scissors, etc.) in field. Pollination methods; prevention of cross pollination. The harvesting and preserving of seeds of plants, recording of breeding work. Hybridizing different types of flowers.

7. Methods used and results obtained in the breeding of important crops.

Practical Examination.

The study of variation by measurement, including calculation of standard deviation and probable error, and plotting the results obtained. The processes of selfing and crossing plants and the modifications necessary in particular cases.

The preparation of results of actual breeding work done by the candidate during the course.

(C).—Advanced Agricultural Chemistry.

1. The soil.—A thorough study of the methods of the formation of soils, their physical characters, the relation of these physical characters to the growth of plants. The constituents of soil, their determination, their condition, their importance. Chemical analysis of the soil. Determination of total and available plant food. Injurious constituents of soil, their detection and examination. The living organisms of the soil, and their behaviour. Deterioration of soils, and methods of maintaining and improving the fertility of soils by manures and other means.

2. Plant chemistry and plant nutrition.—The rough study of plant chemistry and physiology and the production and the utilisation of the constituents of plants.

3. Animal Chemistry.—This will include a thorough study of the principles of feeding, of the value of different rations under different conditions, of the methods of examination of foods, and the detection of the common poisons. Relation of food to manure.

4. Dairy Chemistry.—A thorough study of milk and its products and the changes which take place during dairy operations. General knowledge of milk bacteria, both good and bad, and their control.

Practical Examination.

Examination of soils, farm waters, manures, foods, plant products of agricultural importance, milk, butter, and other dairy products. The investigation of injurious foods. The examination of infertile soils. A good knowledge will be required of the operations usually carried on in the laboratory of an agricultural chemist.

(D).—Advanced Animal Husbandry and Dairying.

1. Advanced animal breeding, handling and management :—

Variations, causes of variations, environment, selection, heredity, pedigree, telegony, systems of breeding. Systems of establishing and maintaining cattle herds. Selection, management and treatment of mature herd. Milk records. Care of the sick and diagnosis and treatment of common diseases. Infectious diseases, their prevention and control.

2. Advanced dairying and dairy farming :—

(a).—Systems of dairy farming, conditions influencing choice of system, selection of a dairy farm.

Buildings and sanitation suitable for a dairy. General characteristics and special confirmation features of dairy breeds of India and abroad. Dairy breeds of India and their adaptability to different dairy conditions.

General principles and practices of dairy farming, management and equipment.

Fodder production for the dairy farm and its utilisation. Cost of milk production.

(b).—Methods of handling milk and its products, cost of handling and marketing, including pasteurization, sterilization, cooling. Soft cheese making, butter making, casein manufacture, making, and their bye-products.

(c).—Simple system of dairy farm book-keeping and record keeping.

Practical Examination.

Practical feeding, handling and management of live stock.

Handling and working of dairy machinery, appliances and utensils.

Each candidate must have had the care of animals, and must present a diary, recording the feeds, work or milk, of the animals under his charge, attested by the Principal of the College.

(E).—Advanced Agricultural Economics.

1. Outlines of economic theory.

(a) Consumption—Utilities and goods, law of diminishing utility, demand, the economy of spending and saving.

(b) Production—Factors of production and the organisation of production.

(c) Transfer of goods (exchange), value, price, market, money, credit and banking and international trade.

- (d) Distribution—rent, wages and the labour problems, interest and profits.

2. Agricultural Economics.

Definition, economic motives, and ideals in agriculture, development of farmers' economic problem. The choice of crops. Economics of the live-stock industry. Miscellaneous work correlated with crop and live-stock enterprises.

Land as basis of agricultural production. Land classification, agricultural land, possibilities of increasing agricultural land farm equipment, the human basis of agricultural production.

The choice and the combination of the grades of the factors of production, proportions of the factors of production.

The size of farms—factors determining the size of farms, economic holdings, farm labour and wages, farm labour supply, factors determining wages, variation in wages, different systems of paying wages. Farm credit and the rate of interest.

Land rent and profits. Theory of land rent, factors determining rent and profits, value of land and equipment. Relation of rent to value. Relation between landlord and tenant.

The farmer and the middleman.

Detailed study of the marketing of agricultural produce.

The theory and practice of co-operation.

Practical Examination.

Practical study of economics of farms representing at least two tracts of the Bombay Presidency and a paper submitted thereon, and full acquaintance with details with regard to them.

The handling of statistics and the preparation of maps, graphs, and tables in connection with agriculture.

(F).—Advanced Horticulture.

In the study of this subject special attention will be given to the application of botanical knowledge to the elucidation of practical problems.

- (a) Study of the following fruit plants with reference to their morphology, anatomy, physiology, varieties, diseases and cultivation :—

Mango, banana, guava, papaya, citrus, pomegranate, grape, *chiku*, fig, pineapple, date, *bor*.

- (b) Methods of fruit preservation. Preparation of horticultural produce for the market.

- (c) Floriculture.

- (d) The principles and practice of artistic garden planning. The chief ornamental plants available in the Bombay Presidency and their varieties and culture.

Practical Examination.

Recognition and description of species and varieties of fruit trees and their fruits, and of ornamental plants. Investigation in field and

laboratory of practical problems in connection with these. Planning gardens. Preservation of fruit.

(G).—**Advanced Plant Pathology.**

1.—General orientation.—The normal plant and its functions, the phenomena of disease, the ætiology of disease, the results of disease to the individual plant, the crop and the cultivator.

2.—The technique of disease investigation—

(a) Methods of approach to a disease problem. Survey, observation, field and laboratory tests.

(b) Methods of isolation and culture of organisms found in diseased plants.

(c) Methods of inoculation.

(d) The interpretation of experimental results.

3.—The control of plant diseases—

(a) Control by means of altering environmental conditions, including the eradication of diseased plants.

(b) Control by the application of chemicals.

(c) Control by the breeding of resistant types or by the substitution of resistant types from other countries.

(d) Plant disease legislation.

(e) Plant disease propaganda and large-scale control.

4.—More detailed study of commoner pests and diseases of agricultural plants, including a study of the morphology, anatomy, biology and classification of the casual organisms.

Practical Examination.

Exercises in the identification of plant diseases, the technique of disease investigation, laying out plans for treatment and carrying out methods of treatment.

Standard for Passing the Examination.

R. 140. All candidates in the examination for the Degree of Bachelor of Agriculture must obtain, in order to pass, 45 per cent. of the total number of marks obtainable, 40 per cent. of the marks obtainable in Agriculture and the optional, and 33 per cent. in the remaining subjects. These percentages must be obtained separately in the papers and in the practical examination in each subject. Candidates who obtain 66 per cent. of the total will be placed in the First Class. The marks obtained by candidates in subjects III and IV taken at the end of the junior B.Ag. year will be counted towards the final result at the end of the senior year for the purpose of determining a pass on the grand total, classes and the order of merit. Candidates passing the examination in this way will not, however, be eligible for any prizes or scholarships awarded at the examination by the University.

R. 141. A candidate who has obtained 50 per cent. of the total marks obtainable in Agriculture, or the optional subject, or who has obtained 44 per cent. of the total marks in any of the remaining subjects may, at

his option, be exempted from appearing in that subject (provided he has obtained the minima in the papers and in the practicals of that subject as required by Regulation 140) at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper, or subject or practical together with the percentage of the total marks in such subject or subjects required by Regulation 140. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

R. 142. Candidates who fall short of the minimum required to pass under one head by not more than three per cent. and who obtain an aggregate of at least 55 per cent. of the total marks obtainable shall, on the recommendation of a majority of not less than two-thirds of the examiners present at the final meeting, be declared to have passed the examination.

SCHEDULES.

Intermediate Examination in Agriculture.

Subject.	Papers.		Practical Examination.		Total.
	Number.	Marks.	Number.	Marks.	Marks.
Agriculture	2	200	1	150	350
Chemistry	2	200	1	100	300
Botany	1	100	1	100	200
Mathematics and Physics	1	100	1	50	150
Total ...	6	600	4	400	1,000

Examination for the Degree of B.Ag.

Subject.	Papers.		Practical Examination.		Total.
	Number.	Marks.	Number.	Marks.	Marks.
Agriculture	4	400	2	300	700
Chemistry	1	100	1	100	200
Botany	1	100	1	100	200
Plant Pathology ...	1	100	1	100	200
Agricultural Engineering	1	100	1	100	200
Optional Subject ...	1	100	1	100	200
Total ...	9	900	7	800	1,700

CHAPTER XV.—MASTER IN AGRICULTURE

- O. 233.** Every candidate for the degree of Master in Agriculture must be a Graduate in Agriculture of this University and must have been, engaged in the practice of Agriculture or of work or research in connection with agriculture for a period of at least three years after passing the examination for the degree of Bachelor of Agriculture.
- O. 234.** Each candidate must submit, with due authentication, before December 31st in any year, a full report of work or research of an original character in the agricultural field, together with copies of any publications which he has made subsequent to his graduation. This report with any documents accompanying it will be submitted to the Board of Studies in Agriculture, who will consider whether there is *prima facie* evidence that it represents a definite contribution to knowledge in the agricultural field sufficient to warrant the conferring of the degree. If the Board of Studies consider that there is *prima facie* evidence, the report shall be referred by the Syndicate to a referee to be named by the Academic Council and on his opinion being received, the Board shall decide whether the candidate shall receive the pass degree or the degree with *distinction*. The Board shall have the option of calling the candidate and examining him orally in connection with the work which he presents for their consideration.

BACHELOR OF ENGINEERING.

GENERAL.

- O. 235.** A candidate for the Degree of Bachelor of Engineering must produce a certificate showing that he has passed the Intermediate Examination in Science of this University or of a University recognized by this University in the group of Mathematics, Physics and Chemistry, or a certificate of having passed the Intermediate Arts Examination with Mathematics as the optional subject and the B.A. Examination with Physics and Chemistry as the Optional group.
- O. 236.** A candidate will be required to pass three examinations : the first, to be called the First Examination in Engineering ; the second, the Second Examination in Engineering (Civil or Mechanical); and the third, the Examination for the Degree of Bachelor of Engineering (Civil or Mechanical).

CHAPTER XVI.—FIRST EXAMINATION IN ENGINEERING.

Admission.

- O. 237.** No candidate will be admitted to this examination unless he produces satisfactory testimonials of having kept two terms in a College in Engineering recognized by the University of Bombay.
- R. 143.** Candidates will be examined in subjects I and IV to VIII specified below. As regards subjects II, III and IX, there will be no University examination therein. Each candidate must, however, produce a

certificate from the Principal of his College that he has satisfactorily completed the course prescribed in those subjects. Details of the courses in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

- I.—Mathematics. (One paper of 100 marks.)
- II.—Physics. (College certificate only.)
- III.—Chemistry. (College certificate only.)
- IV.—Mechanics. (One paper of 100 marks.)
- V.—Building Materials and Construction. (One paper of 100 marks.)
- VI.—Prime Movers. (One paper of 100 marks.)
- VII.—Surveying. (One paper of 100 marks; Practical work during the College terms, 50 marks.)
- VIII.—Drawing. (One paper of 100 marks; Term work drawings, 50 marks.)
- IX.—Workshop Practice. (College certificate only.)

Syllabus.

R. 144.

I.—MATHEMATICS.—(One Paper).

100 marks.

Practical applications of Plane Trigonometry.

Spherical triangles with their elementary properties.

Graphs of functions, deduction of laws from numerical data by graphical methods, elementary Vector Algebra.

Calculus.—Partial differentiation. Taylor's theorem. Maxima and minima of functions of two dependent variables. Double integration. Mensuration of areas and volumes by the methods of Calculus.

R. 145.

II.—PHYSICS.

(College Certificate only.)

Subjects to be treated with reference to their application to Engineering problems.

Thermometry. Pyrometers. Changes of volume with temperature. Freezing and its effects. Theory and practice of jacketing.

Isothermal adiabatic expansion.

Kinetic theory of gases.

Quantity of heat. Latent and specific heat. Transformation of energy. Heat transmission and insulation, lagging and steam jacketing.

Dry and saturated steam.

First and second laws of Thermodynamics.

Wave theory of light, refraction, reflections, diffraction, interference and polarisation. Gratings. Spectra, spherical and chromatic aberration, achromatism.

Telescopes, transit and equatorial, microscopes, spectroscopes, sextants, level telescopes, optical square.

Electricity and Magnetism.

Conduction and insulation. Production of electricity. Electric charges, their distribution and measurement.

Laws, units and measuring apparatus for electric currents. Work done by electric currents. Potential resistance ; laws, units and measurement.

Electricity and heat and their relationship. Resistance pyrometers. Thermo-electricity. Thermo-couples and thermo-junction pyrometers.

Electro-magnetic induction, dynamos, transformers, direct current motors and their efficiencies. Single phase alternators. Induction coils and inductance. Eddy currents. Virtual volts and amperes. Lag and lead. Choking coils. Transmission and distribution of electric power. Bells and telephones.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has attended a course of lectures in, and has a satisfactory knowledge of, the above subjects ; and that he has handed in a note-book containing an approved record of his work in the laboratory.]

R. 146.

III.—CHEMISTRY.

(College Certificate only.)

(Subjects to be treated with reference to their application to Engineering problems.)

The commoner elements, their properties, commoner compounds, mixtures and alloys. Their preparation on a commercial scale.

Combustion and flame. Fuels, solid, liquid and gaseous. Calorific value of fuels.

Water, natural waters, temporary and permanent hardness, methods of softening on a large scale, water analysis, nitrifying bacteria in water. Chemistry of water purification and sewage disposal. Salt efflorescence in irrigation.

Metallurgy of aluminium, iron, manganese, copper, mercury, zinc, tin, lead, silver and gold.

The chemistry of the setting of cements. Cementing materials, lime. Bricks, firebricks, clays, pottery, glass, etc.

The chemistry of paints and protective coverings. Rusting of iron, glues, lubricating oils, lubricants, solid and liquid, etc.

The chemistry of electric cells.

Course of Practical Work Prescribed.

1. The use, particularly in metallurgy, of standard and normal solutions. Acidimetry and alkalimetry determinations ; determinations by oxidation and reduction ; the estimation of chlorides in water ; estimation of iron, copper and manganese in solutions,

2. Experiments on simple qualitative tests. Impurities in metals. Adulterants in paints, etc. Clays.
3. Experiments on cement and lime, qualitative and quantitative analysis.
4. Simple water analysis and hardness of water.
5. Simple coal analysis.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has attended a course of lectures in, and has a satisfactory knowledge of, the above subjects; and that he has handed in a note-book containing an approved record of his work in the laboratory.]

R. 147.

IV.—MECHANICS—(One Paper).

100 Marks.

Force, mass, weight, etc.; time and space action of a force; work; power, graphic representation; friction, effect of friction, work against friction, efficiency of machines, mechanical advantage.

Energy of a rotating body, moment of inertia and radius of gyration.

Mechanism of reciprocating engine; turning moment; effect of inertia; fly-wheels; governors.

Straight line motions; wheel trains; lathe gears; winch; Weston and other geared pulley blocks.

Coil frictions; belt and rope driving; spur and level gearing.

Inclined planes, screw and worm gearing.

Epicyclic gears.

Force and link polygons. Stresses in simple framed structures, gib crane and simple roof truss.

Parallel force, reactions on supports of beams.

Fluid pressure: total pressure and centre of pressure, flotation, hydraulic press and accumulator.

Graphic statistics of simple frames.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed a practical course based on the examination course as laid down above and handed in a note-book containing a full record of his laboratory work.]

R. 148. V.—BUILDING MATERIALS AND CONSTRUCTION—(One Paper).

100 Marks.

Stones, their varieties and uses, bricks, tiles, wood. Mortars, cements, concretes, plasters; uses, durability and preservation of the above including the use of paints. Quarrying and dressing stones.

Selecting clay. Moulding and burning bricks in kilns, bull's kilns.

[*N. B.*—Questions of Geology and the chemistry of paints should not come into this.]

Limes, hydraulic and fat; collection, burning and slaking, Portland cement, preparation, tests for quality and uses,

Wood, sapwood, heart-wood, knots, felling, seasoning; durability and conditions of preservation and destruction. Principal uses. Joiner and carpentry, wooden floors; roof trusses, rafters, battens, etc.; wooden staircases and panelling. "Falsework." Joints used in wood work.

Metals. Iron, cast iron, malleable castings, wrought iron. Steel and its properties including hardening, tempering, etc. Other structural metals and alloys.

R. 149.

VI.—PRIME MOVERS.—(One Paper.)

100 Marks.

Solid, liquid and gaseous fuels; their value for different purposes and utilization.

Lubrication and lubricants.

Engineering examples of effects of heat on solids and gases. Absolute pressure. Superheating. Boiling. Condensation of steam. Vacuum.

Properties of steam. The diagram of work.

Elements of simple engine details, steam, gas and oil. Boilers, Lancashire, Cornish, locomotive and other types; pumps, furnaces. Refrigerators.

The indicator. Types of indicators. Indicated and brake horse powers. Types of brakes.

R. 150.

VII.—SURVEYING.—(One Paper.)

(100 Marks; Term Work 50 Marks.)

General principles of surveying: determination and plotting of position, scales and representative fractions; degree of accuracy required.

Simple chain and tape surveying; optical square, cross staff clinometer.

Field book. Check measurements.

Sources and amounts of errors; accuracy obtainable.

Setting out work with chain and tape only; boning rods and profiles.

Prismatic compass, its construction and use; surveying with compass and chain.

Construction of three and four foot screw "Y" and dumpy levels. Handling and setting up. Permanent and temporary adjustments. Reading the staff.

Principles of levelling and methods of recording levels; check-levels; level book.

Bench marks; standard datum; assumed datum; longitudinal and cross sections; checking work.

Sources of error; precautions; accuracy required.

Plotting levels, cross section and Survey Plans.

Plane table ; use of the simple types ; positions by intersection, resection and interpolation ; precautions and accuracy of work.

PRACTICAL WORK DURING THE TERMS (50 marks).

Simple chain and tape survey. Measurement of land with cross staff. Setting out a building from a plan.

A prismatic compass and chain survey. A plane table traverse. A line of levels and cross section.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has handed in a complete and satisfactory set of drawings (and field-books) on the above subjects, executed by himself within the walls of the College. The drawings and field-books shall be submitted to the examiners and allotted marks upto a maximum of 50 and shall be taken into consideration in awarding marks.]

R. 151.

VIII.—DRAWING.* { One paper : 100 marks.
Term work drawings : 50 marks.

Sketches from the solid or from memory of simple mechanical objects, *e.g.*, bolts and nuts, bearings, cocks, valves, riveted joints, pipe joints, etc.

Model drawing ; shading with pencil ; hatching and plain wash colouring.

Mechanical drawings. Neat line plans, elevations, sections and projections drawn to scale in ink or pencil and uncoloured or wash coloured, of simple mechanical objects or machine parts, either from the solid or from the flat (*e.g.*, a section from a plan and elevation), printing and dimensioning.

Geometrical drawing.

Simple problems in the construction of plane figures, projection of solids, section and intersection of solids and development of surfaces.

[*Note.*—Each candidate shall submit a set of drawings and sketches certified by the Principal of his College that they have been executed in a satisfactory manner within the walls of the College. These drawings and sketches shall be submitted to the Examiners and shall be allotted marks up to a maximum of 50.]

R. 152.

IX.—WORKSHOP PRACTICE.

(*College Certificate only.*)

Carpentry.—Names, use and setting of hand tools. Construction of halved joints, single mortise, tennon joint, mitre joint, dove tail single oblique mortise and tennon joint, rafter joint, etc.

* When once a set of Drawings has been submitted for the examination and marked, that marking will be carried on to subsequent examinations unless new Drawings are presented.

Fitting.—Names, use and setting of hand tools. Chipping cast iron, face and cross cuts ; filing square and hexagonal prisms, callipers, inside and outside ; centre punch, etc.

Forging.—Names, use and setting of hand tools. Dowel pin, ring, figure 8, flat bend, edge bend, upsetting and swaging, etc.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies.]

- R. 153.** On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Standard for Passing the Examination.

- R. 154.** To pass the examination the candidate must obtain 33 per cent. of the full marks in Mathematics, 40 per cent. in each of the other subjects, and 45 per cent. of the total marks obtainable. Those of the successful candidates who obtain 60 per cent. of the total marks obtainable will be placed in the First Class.

- R. 155.** A candidate who has obtained 45 per cent. of the total marks in Mathematics, or who has obtained 50 per cent. of the total marks in any of the other subjects, will, at his option, be excused from appearing in that subject at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each subject, together with the percentage of the total marks in such subject or subjects required by Regulation 154. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

- R. 156.** Candidates who fall short of the minimum required to pass under one head by not more than three per cent. and who obtain an aggregate of at least 55 per cent. of the total marks obtainable shall, on the recommendation of a majority of not less than two-thirds of the Examiners present at the final meeting, be declared to have passed the examination.

CHAPTER XVII.—SECOND EXAMINATION IN
ENGINEERING (CIVIL).

Admission.

- O. 238.** No candidate will be admitted to this examination unless he produces satisfactory testimonials of having kept two terms in a College recognized in Civil Engineering by the University of Bombay subsequently to passing the First Examination in Engineering.

- O. 239.** A student who has passed in all subjects but one at the F. E. Examination in conformity with Regulation 155 will be allowed to

keep terms and appear for the S.E. (Civil) Examination after keeping two terms, but will not be declared to have passed the S.E. Examination under any circumstances, unless he has passed in the remaining subject of the F.E. Examination held either in a previous, or in the same examination, season.

R. 157. Candidates will be examined in subjects I to VII specified below. As regards subject VIII, there will be no University examination therein. Each candidate must, however, produce a certificate from the Principal of his College that he has satisfactorily completed the course prescribed in that subject in the College Workshops. Details of the courses in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

I.—Applied Mechanics. (One paper of 100 marks.)

II.—Calculus. (One paper of 100 marks.)

III.—Prime Movers. (One paper of 100 marks and a practical examination of 50 marks.)

IV.—Building Construction. (One paper of 100 marks.)

V.—Roads, Railways and Bridges. (One paper of 100 marks.)

VI.—Surveying. (One paper of 100 marks and a practical examination of 50 marks.)

VII.—Drawing. (Practical 100 marks; Oral and sketching 50 marks.)

VIII.—Workshop Practice. (College certificate only.)

R. 158. On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 159. I.—APPLIED MECHANICS.—(One Paper.)

(100 Marks.)

(Subjects to be treated, wherever possible, both analytically and graphically.)

Stress ; strain ; elastic limits ; elastic constant ; resolution of stress ; ellipse of stress ; principal stress and planes ; principal strains.

Mechanical properties of metals ; elastic limit and yield point ; ductility ; ultimate and elastic strength ; form of fracture ; measure of ductility ; impact tests ; hardness ; effect of shape of test piece ; effect of over-strain ; hardening and annealing ; influence of rate of loading ; effect of temperature.

Resiliency ; live loads ; resistance to shock ; fatigue ; consideration of experimental results ; limiting range of stress.

Factors of safety.

Force transmitted by members of framed structures.

Riveted joints ; strength of thin shells.

Bending ; diagrams of bending moment and shearing force for fixed and moving loads ; relation between bending moment and shearing force ; simple and other bending ; moments of inertia of section ; beams of uniform strength ; distribution of shear stress ; pitch of rivets in girders ; principal stresses in beams ; bending beyond elastic limit ; deflection of beams ; stiffeners ; curvature, slope and deflection ; bending moment diagrams and deflection and slope. Strength and stiffness of springs and shafts in torsion. Strength of columns ; Euler's theory ; Rankine and other formulæ.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course based on the above examination course and handed in a note-book containing a full record of his laboratory work.]

R. 160.

II.—CALCULUS.—(One Paper.)
(100 Marks.)

Applications to problems of mean value, tangents, normals, curvature, centre of gravity, centre of pressure, moments of inertia. Fourier's series without proof, and its applications. Motion in a line, motion in a curve, bending moments.

Differential equations of the first order and simple linear differential equations of the second order.

R. 161.

III.—PRIME MOVERS.—(One Paper and Practical.)
(Paper 100 Marks : Practical 50 Marks.)

Laws of permanent gases ; rate of heat reception ; entropy.

Hot air engines, cycles of operation. Carnot's cycle, conditions for maximum efficiency.

External work by steam. Internal energy. Superheated steam. Throttling or wire-drawing. Measurement of dryness of steam. Theory of throttling calorimeter.

Theory of steam engines. Effect of initial pressure, ratio of expansion, and back pressure. Difference between hypothetical and indicator diagram. Simple and compound expansions.

Gas and oil engines. Constant pressure and constant volume cycles. Effects of compression. Otto and Clerk's cycles ; indicator diagrams.

Theory of air compressors and motors, boilers and furnaces.

Valve diagrams and valve gears, various types.

Single cylinder steam engines and compound engines. Condensers, jet and surface ; air pumps, feed pumps, steam turbines ; marine engines. The operation and care of road rollers and portable engines.

Laboratory.—Simple tests on steam, oil and gas engines, boilers, pumps and turbines.

Testing of fuels.—Coal, oil, wood and gas.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course based on the

above examination course and handed in a note-book containing a full record of his laboratory work. The note-book shall be submitted to the Examiners and may be taken into consideration in awarding marks.]

Each candidate will be examined practically on the work performed in the laboratory.

R. 162.

IV.—BUILDING CONSTRUCTION.—(One Paper.)

(100 Marks.)

Foundations.—Initial survey; trial pits, trial borings. Depth and breadth of foundations in reference to strata and weight to be carried, strata and their bearing capacities. Suitability of strata with reference to special uses as bridge founs, dam founs, weir founs. Wet foundations, methods of dealing with them. Piles—wood, iron, screw and concrete; coffer dams; caissons; wells. Pumping in wet founs. Black soil foundations. Reinforced concrete rafts; mass concrete founs.

Harbour and dock works.

Building instruments and tools, scaffolding and centering.

Classes of masonry and their uses. Ashler, coursed rubble, rubble; ornamental work; bending of stones. Pointing methods to adopt and methods to avoid.

Brick work; bonds, laying, finishing. Copings, cornices and string courses.

Arches.—brick, stone and concrete; right and skew, and their construction.

Reinforced and monolithic brick work. Reinforced concrete construction, false work, placing the steel. Selection of materials, proportions, mixing, laying, after treatment. Removal of forms, Concrete, precast block work, block making, maturing, laying.

Floors. Loads on floors, concrete, stone, terracotta and reinforced brick floors, uses and methods of construction. Ceilings and lath and plaster construction. Roofs, flat, hipped and vaulted and roof coverings. Staircases, straight and spiral, of wood, stone and reinforced concrete. Structural plumbing.

R. 163.

V.—ROADS, RAILWAYS AND BRIDGES.—(One Paper.)

(100 Marks.)

Roads.—Permanent roads. Telford roads. Macadam roads. Temporary roads. Resistance of vehicles on roads variously paved. Ruling gradients. Staking out the centre line. Formation breadth and cross section. Earthwork. Culverts and drains. Camber Road metal. Rollers and rolling. Paving with stone and wood blocks. Concrete and reinforced concrete road. Tar macadam. Asphalt and other surfaces. Hill roads. Selection of alignment. Wear of roads. Maintenance and repairs.

Railways.—Status of existing railways in India. Formation of roadway. Earthwork. Formation. Tunnelling in rock and clay.

Culverts and drainage. Regulations regarding bridges and fixed structures. Level crossings. Fencing. Mile and gradient posts. Permanent way. Gauge of track. Loading gauge. Ballast. Timber. Cast iron, wrought iron, steel, concrete and reinforced concrete sleepers. Chairs. Rails. Rail joints. Cant of rails. Creep. Curves, Super-elevation on curves. Effects of curves on wear of tyres and rails. Transition curves. Points and crossings. Sidings. Railway stations, selection of site, approaches, roads, yards, general layout. Platforms. Engine sheds. Turn tables. Water columns and tank houses. Goods yards. Signalling and interlocking. Rolling stock. Brakes.

Gradients and curves. Resistance of railway trains on level and straight lines, and on curves and steep gradients. Special devices on steep gradients. Train resistance. Tractive power. Adhesion. Types of engines for ordinary and special duties. Limit of load on wheels. Fatigue of rails.

Survey and choice of line.

Bridges.—Types of bridges, and methods of design, fabrication and erection.

R. 164.

VI.—SURVEYING.—(One Paper and Practical.)

(Paper 100 Marks; Practical 50 Marks.)

Advanced levelling. Contours, grade contours, setting out a grade and side slopes. Stadia and their use. Diaphragm and compass. Correction for curvature and refraction.

The theodolite; types of instrument; parts of the instrument and their use. Handling and care of instruments; temporary and permanent adjustments.

Triangulation and traversing; Gale's traverse system.

Errors; degree of accuracy and checking work.

Laying out curves with and without theodolites; setting out work generally with the theodolite; heights of buildings, etc.

Use of planimeter; finding areas by various methods.

Use of smaller instruments; sextant; barometer, etc.

Practice in all the above.

Astronomy. Celestial measurements, use of surveying instruments, refraction, parallax, aberration, equation of time, latitude and longitude.

The Practical Examination will cover the work prescribed for the first two years.

R. 165.

VII.—DRAWING.*

(Practical 100 Marks; Oral and Sketching 50 Marks.)

Each candidate shall submit a complete set of drawings certified by the Principal of his College that they have been prepared in a satis-

* When once a set of Drawings has been submitted for the examination and marked, that marking will be carried on to subsequent examinations unless new Drawings are presented.

factory manner within the walls of the College, and reports on the survey projects. The drawing shall consist of :—

Survey drawings.

Not less than two sheets of design, finished in ink and coloured, of masonry structures in connection with subject V of the F. E. year and IV of the S. E. year.

The drawings and reports shall be submitted to the Examiners and marks shall be awarded as follows :—

40 per cent. for draftsmanship, hand printing, figuring and dimensioning, 40 per cent. for details, and 20 per cent. for the reports.

The practical examination shall consist of :—

An oral test with general questions on the designs, surveys and reports.

Sketching.

Marks shall be awarded as follows :—

25 for the oral, and 25 for sketching.

R. 166.

VIII.—WORKSHOP PRACTICE.

(College Certificate only.)

Joining of plates by means of rivets, welding, brazing and soldering ; pattern making and moulding, etc.

[*Note.*—Every candidate must produce a certificate from the Principal of his College that he has satisfactorily completed the course.]

Standard for Passing the Examination.

R. 167.

To pass the Examination the candidate must obtain 40 per cent. of the full marks in each subject and 45 per cent. of the total marks obtainable. The minimum of 40 per cent. for a pass must be obtained *separately* in the written and practical examination in each subject. Those of the successful candidates who obtain 60 per cent. of the total marks obtainable will be placed in the First Class.

R. 168.

A candidate who has obtained 50 per cent. of the total marks in any subject will, at his option, be excused from appearing in that subject (provided he has obtained the minima in the paper and in the practical of that subject required by Regulation 167) at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper, subject or practical, together with the percentage of the total marks in that subject or subjects required by Regulation 167. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

R. 169.

Candidates who fall short of the minimum required to pass under one head by not more than three per cent. and who obtain an aggregate of at least 55 per cent. of the total marks obtainable shall, on the recommendation of a majority of not less than two-thirds of the Examiners present at the final meeting, be declared to have passed the examination.

CHAPTER XVIII.—EXAMINATION FOR THE DEGREE OF BACHELOR OF ENGINEERING (CIVIL).

Admission.

- O. 240.** No candidate will be admitted to the examination unless he shall have kept two terms in a College recognized in Civil Engineering by the University of Bombay subsequently to passing the Second Examination in Engineering (Civil).
- O. 241.** A student who has passed in all subjects but one at the S. E. (Civil) Examination in conformity with Regulation 168 will be allowed to keep terms and to appear for the B.E. (Civil) Examination after keeping two terms, but will not be declared to have passed the B.E. Examination under any circumstances, unless he has passed in the remaining subject of the S.E. (Civil) Examination held either in a previous, or in the same examination, season.
- R. 170.** Candidates will be examined in the following subjects excepting, however, Estimating, which shall be a certificate subject as stated below. Details of the courses in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.
- I.—Applied Mechanics. (One paper of 100 marks.)
 - II.—Geology. (One paper of 75 marks and a practical examination of 50 marks.)
 - III.—Hydraulics and Irrigation. (One paper of 100 marks.)
 - IV.—Water Supply and Sanitary Engineering. (One paper of 100 marks.)
 - V.—Estimating. (College certificate only.)
 - VI.—Drawing. (Practical, 100 marks ; Sketching and Oral, 50 marks.)
 - VII.—Electrical Engineering. (One paper of 100 marks.)
- R. 171.** On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

- R. 172.** I.—APPLIED MECHANICS.—(One Paper).
(100 Marks.)

Revision of Second Year work.
 Earth pressure, dams and retaining walls.
 Beams, continuous beams, columns, plate girders, timber and metal roof and other framed structures, bridge floors, hanging chains, suspension bridges, masonry and metal arches.
 The design of reinforced concrete beams, slabs, columns and other structures.

R. 173.**II.—GEOLOGY.—(One paper and Practical.)***(Paper 75 Marks ; Practical 50 marks.)*

General Geology.—Objects and methods. Divisions of the subject. The crust and interior of the Earth.

Geological agencies, subaerial and subterranean. Denudation and deposition. Volcanoes and earthquakes.

Formation of the stratified rocks, stratification and lamination. Dip, strike, out-crop and foldings of rocks and their significance. Overlap, outlier and inlier. Joints in rocks. Faults, their varieties and importance in mining and well sinking. Simple problems in Structural Geology. Artesian wells.

Petrology.—The composition, alteration and characters in hand specimens of the common rock forming minerals and ores of commercial importance. Igneous, aqueous, and metamorphic rocks. Their classification, composition and characters in hand specimens. Arrangement of igneous rocks in earth's crust. Contemporaneous and intrusive rocks. Technical terms employed. Agents of metamorphism. Extent of metamorphism. Foliation and cleavage. Metalliferous veins. Industrial aspect of rocks.

Stratigraphy and Indian Geology.—The uses of fossils in historical geology. Other aids in correlation of rocks. Order of superposition.

Chronological groups and cycles. The classification of the stratified rocks into systems and divisions.

The geological history of India in broad outline. The distribution of the stratified and igneous rocks in India. Occurrence of the more important ores and minerals of India. Petroleum and coal.

Applied Geology.—Geology in engineering operations, water supply, excavations and tunnelling, boring, etc. Drainage.

Geological maps and sections. Surveying.

Practical.—Identification in hand specimens of the common rock forming minerals, ores and rocks. Geological maps and sections.

R. 174.**III.—HYDRAULICS AND IRRIGATION—(One Paper.)***(100 Marks.)*

Hydraulics.—Discharge from small orifice. Discharges from pipes, long and short. Discharge from large orifices under constant and varying heads, notches, syphons, partially submerged discharge. Discharge from weirs, free overfall and submerged.

Fluid friction laws, co-efficients, H. M. R., hydraulic slopes, velocities in pipes, short and long. Flow in open channels. Formulæ and co-efficients. Influence of form on velocity. Variations of velocity in vertical and horizontal sections. Gauging of flow of water. Instruments used.

Pressure and velocity energy of water. Bernoullis Theorem.

Irrigation.—Irrigation : importance and nomenclature. Irrigation from wells, storage rivers. Inundation and perennial irrigation,

Conditions of irrigation in India and abroad. Catchment areas. Rain-fall and run off. Supplies available. Storage tanks. Dams—earthen, masonry ; sites, founds, profiles, materials and methods of construction, excluding questions of stability of masonry dams.

Sluices in dams, waste weirs, pick up weirs.

River training.

Canal head works, weirs, and undersluices.

Canal alignment, command, gradients, velocities, silting, non-silting and scouring sections. Falls. Escapes : functions, design and location. Cross-drainage works, including aqueducts, culverts, level crossings, super-passages, syphons, including calculation of waterway.

Distributaries, their design, alignment, distributory heads and controlling apparatus.

Water courses and outlets, modules, semi-modules and rateable modules. Standing waves. Regulation and rotations. Discharge observations. Duty. "Delta" Assessment.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course based on the above examination course and handed in a note-book containing a full record of his laboratory work.]

R. 175.

IV.—WATER SUPPLY AND SANITARY ENGINEERING.

(One Paper.—100 Marks.)

Water Supply.—Historical summary. Sources of water supply and quantity of water. Pollution, storage reservoirs, quantity per head, open and covered conducts. Filtration and sterilization. Pumps and pumping. Pipe lines, service reservoirs, relieving reservoirs, pressure and volumes required for ordinary and fire services. Distribution systems, valves, hydraulic fittings, meters and waste prevention.

Sanitary Engineering.—The atmosphere, ventilation, warming, cooling. Cubic contents of rooms for various purposes. Sewage contents and composition. Garbage. Drains and sewers, construction, size, gradients and flow, defects and testing for defects. Sewage lifts, ejector and pumps. House connections, traps, junctions, ventilators, vents and manholes. House utensils, sinks, closets, urinals. Lavatories ; connecting, cleansing and disinfection. Sewage and refuse disposal, methods and details.

R. 176.

V.—ESTIMATING.

(*College Certificate only*)

Estimating quantities and the costs of buildings and other structures of timber, masonry, reinforced concrete, earth work and steel. Specifications. Costing of work.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has attended a course of lectures on Estimating and satisfactorily completed the exercises set therein.]

R. 177.**VI.—DRAWING*—PRACTICAL SKETCHING AND ORAL.**

(Practical, 100 Marks ; Sketching and Oral, 50 marks.)

Each candidate shall submit a complete set of detailed *working* drawings certified by the Principal of his College that they have been prepared in a satisfactory manner within the walls of the College and reports on the projects and designs.

The drawings shall consist of :—

- (a) A Civil Engineering project in not less than two sheets, fully dimensioned, finished in ink and coloured.
- (b) A design for a steel structure in not less than two sheets, fully dimensioned, finished in ink and coloured.

The drawings and reports shall be submitted to the Examiners and marks shall be awarded as follows :—

40 per cent. for draftsmanship, hand printing, and dimensioning,
40 per cent. for details, and 20 per cent. for the report.

The practical examination shall consist of :—

- (a) An oral test with general questions on the designs and projects.
- (b) Sketching.

Marks shall be awarded as follows :—

25 for the oral, and 25 for sketching.

R. 178.**VII.—ELECTRICAL ENGINEERING.—(One Paper.)**

(100 Marks.)

Electric and magnetic laws, units and standards. Electrical measuring instruments. Magnetic properties of iron and steel. The magnetic circuit. Induction of electric currents. Elementary principles underlying the design and construction of continuous current generators and motors. Simple laws of alternating currents. Alternating current generators and motors. Alternating current transformers. Electric lighting, glow and arc lamps. Elements of transmission and distribution of electrical energy.

Primary and secondary batteries.

Lghtning Conductors.

Practical Work.—Measurement of low, medium, high, and insulation resistance. Characteristic curves of shunt, series and compound dynamos. Relation between electromotive force, speed and excitation in dynamos and motors. Brake test and efficiency of continuous current motors, both shunt and series, and measurement of losses in armature and field copper, in friction, hysteresis and eddy currents. Coupling, running and testing motors. Testing incandescent lamps, arc lamps, electric fans, electric heaters.

Management of storage cells and determination of efficiency by charging and discharging. Photometry. Jointing and insulating cables. Calibration of ammeters, voltmeters, wattmeters, and energy meters.

*When once a set of Drawings has been submitted for the examination and marked, that marking will be carried on to subsequent examinations unless new Drawings are presented.

Testing of lightning conductors.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and handed in a note-book containing a full record of his laboratory work.]

Standard for Passing the Examination.

- R. 179.** To pass the examination the candidate must obtain 40 per cent. of the full marks *separately* in the written, practical or oral examination in each subject, and 45 per cent. of the total marks obtainable. Those of the successful candidates who obtain 66 per cent. of the total marks obtainable will be placed in the First Class.
- R. 180.** A candidate who has obtained 50 per cent. of the full marks in any subject will, at his option, be excused from appearing in that subject (provided he has obtained the minimum in the paper and in the practical of that subject required by Regulation 179) at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination : Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each paper, subject or practical, together with the percentage of the total marks in such subject or subjects required by Regulation 179. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.
- R. 181.** Candidates who fall short of the minimum required to pass under one head by not more than three per cent. and who obtain an aggregate of at least 55 per cent. of the total marks obtainable shall, on the recommendation of a majority of not less than two-thirds of the Examiners present at the final meeting, be declared to have passed the examination.

CHAPTER XIX.—SECOND EXAMINATION IN ENGINEERING
(MECHANICAL)*Admission.*

- O. 242.** No candidate will be admitted to this examination unless he produces satisfactory testimonials of having kept two terms in a College recognized in Mechanical Engineering by the University of Bombay subsequently to passing the First Examination in Engineering.
- O. 243.** A student who has passed in all subjects but one at the F. E. Examination in conformity with Regulation 155 will be allowed to keep terms and to appear for the S. E. (Mechanical) Examination after keeping two terms, but will not be declared to have passed the S. E. (Mechanical) Examination under any circumstances, unless he has passed in the remaining subject of the F. E. Examination held either in a previous or in the same examination season.

R. 182. Candidates will be examined in the following subjects. Details of the courses in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

- I.—Applied Mechanics. (One paper of 100 marks.)
- II.—Calculus. (One paper of 100 marks.)
- III.—Prime Movers. (One paper of 100 marks and a practical examination of 50 marks.)
- IV.—Electrical Engineering. (One paper of 100 marks.)
- V.—Drawing. (Practical 100 marks; Sketching and Oral 50 marks.)
- VI.—Workshop Practice. (A practical examination of 100 marks.)

R. 183. On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

- R. 184.** I.—APPLIED MECHANICS.—(One Paper.)
As at the Second Examination in Engineering (Civil).
- R. 185.** II.—CALCULUS.—(One Paper.)
As at the Second Examination in Engineering (Civil).
- R. 186.** III.—PRIME MOVERS.—(One Paper and Practical.)
As at the Second Examination in Engineering (Civil).

R. 187. IV.—ELECTRICAL ENGINEERING.—(One Paper.)
As at the Examination for the Degree of Bachelor of Engineering (Civil).

R. 188. V.—DRAWING.*
(Practical 100 Marks; Sketching and Oral 50 Marks.)

Each candidate shall submit a complete set of uncoloured detailed *working* drawings certified by the Principal of his College that they have been prepared in a satisfactory manner within the walls of the College, reports and estimates.

The drawings shall consist of :—

- (a) Machine details from sketches and valve diagrams, and
- (b) Complete working drawings from sketches, estimates of weights and machining areas, tracings and ferrotypes.

* When once a set of Drawings has been submitted for the examination and marked, that marking will be carried on to subsequent examinations unless new Drawings are presented.

The drawings, reports and estimates shall be submitted to the Examiners and marks shall be awarded as follows :—

40 per cent. for draftsmanship, hand printing, and dimensioning ; 40 per cent. for detail ; and 20 per cent. for the reports and estimates.

The Practical Examination shall consist of :—

(a) An oral test with general questions on the drawings, reports and estimates.

(b) Sketching.

Marks shall be awarded as follows :—

25 for the oral, and 25 for sketching.

R. 189.

VI.—WORKSHOP PRACTICE.—(Practical Examination.)
(100 MARKS.)

Joining of plates by means of rivets, welding, brazing, and soldering ; pattern making and moulding ; exercises incorporating fitting and the use of machine tools.

[*Note.*—Every candidate must produce a certificate from the Principal of his College that he has satisfactorily completed the course.]

R. 190.

The regulations regarding the standard for pass, class and exemption are the same as those for the Second Civil Engineering Examination (page 268).

CHAPTER XX.—EXAMINATION FOR THE DEGREE OF BACHELOR OF ENGINEERING (MECHANICAL).

Admission.

O. 244.

No candidate will be admitted to the examination unless he shall have kept two terms in a College recognized in Mechanical Engineering by the University of Bombay subsequently to passing the Second Examination in Engineering (Mechanical).

O. 245.

A student who has obtained exemption from all subjects but one at the S. E. (Mechanical) Examination will be allowed to keep terms and to appear for the B. E. (Mechanical) Examination after keeping two terms, but will not be declared to have passed the B. E. (Mechanical) Examination under any circumstances, unless he has passed in the remaining subject of the S.E. (Mechanical) Examination held either in a previous, or in the same examination, season.

R. 191.

Candidates will be examined in the following subjects. Details of the courses in each subject will be specified from time to time by the Academic Council on the recommendation of the Board of Studies.

I.—Applied Mechanics. (One paper of 100 marks.)

II.—Prime Movers. (Two papers of 100 marks each.)

III.—Hydraulics and Hydraulic Machinery. (One paper of 100 marks.)

IV.—Electrical Engineering. (One paper of 100 marks.)

V.—Drawing. (Practical 100 marks; Sketching and Oral 50 marks.)

VI.—Workshop Appliances and Practice. (One paper of 50 marks and a practical examination of 100 marks.)

R. 192. On the recommendation of the Board of Studies, the Academic Council may, from time to time, prescribe or recommend text-books in the various subjects of this examination and modify from time to time, as may be found necessary, the details of the theoretical and practical courses laid down for this examination.

Syllabus.

R. 193. I.—APPLIED MECHANICS.—(One Paper.)
(100 marks.)

Revision of Second Year's work.—Combined stresses. Crank shafts. Vibrations, free and forced. Critical speeds. Stresses in thick cylinders. Stresses in revolving discs. Strength of boiler flues.

R. 194. II.—PRIME MOVERS.—(Two Papers.)

Part A.—100 Marks.

Entropy of steam. Calculation of dryness fraction after expansion. Mollier diagrams. Total heat. Pressure diagram.

Theory of the steam engine: Work done during the expansion of steam. Perfect steam engine working on Carnot's cycle. Non-expansion engine. Rankine cycle. Temperature-entropy diagram for Rankine cycle. Effect of using superheated steam. The regenerative steam engine. Methods of drawing temperature entropy diagrams for pressure volume diagrams. Valve leakage. Steam jacket. Diagram factors. Steam consumption. Combination of diagrams. Binary vapour engine.

Balancing engines:—Primary balancing and secondary balancing.

Part B.—100 Marks.

Mechanical refrigeration. Types of mechanical refrigerating machines.

Flow of steam through orifices and nozzles. Theory of the steam turbine. Heat transmission. Theory of internal combustion in gas, oil and petrol engines.

Laboratory work and tests.—Scientific and commercial tests of steam and internal combustion engines and boilers, steam turbines, pumps and water turbines.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course on the lines laid down from time to time by the Academic Council on the recommendation of the Board of Studies and handed in a note-book containing a full record of his laboratory work. The note-book shall be submitted to the Examiners and shall be taken into consideration in awarding marks.]

R. 195. **III.—HYDRAULICS AND HYDRAULIC MACHINERY.—(One paper.)**
(100 Marks.)

Hydraulics.—As at the Examination for the Degree of Bachelor of Engineering (Civil.)

Hydraulic Machinery.—General principles of use of hydraulic power.

Description of types of turbines, impulse and reaction. Pelton wheel. Determination of vane angles and wheel diameters. Efficiencies. Governing of turbines.

Hydraulic packings, rams, cranes, lifts, presses, accumulators and intensifiers.

Pumps.—Reciprocating. Separation. Air vessels. Pump valves. Centrifugal and turbine pumps. Action of efficiencies. Vortex chamber. Guide vanes. Determination of leading dimensions.

[*Note.*—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course based on the above examination course and handed in a note-book containing a full record of laboratory work. The note-book shall be submitted to the Examiners and shall be taken into consideration in awarding marks.]

R. 196. **IV.—ELECTRICAL ENGINEERING.—(One Paper.)**
(100 Marks.)

Alternate current generator. The synchronous motor, single and poly-phase. Details of poles and windings. Effects of lagging and leading currents, frequency, wave form, efficiency. Induction motor. Rotary converters.

Generating stations and sub-stations. General arrangement of plant, switch boards, switch gear. Regulating and safety devices; batteries and arrangements of circuits. Synchronising and parallel running of machines.

Systems available for lighting and transmission of power by continuous and alternating currents, single and poly-phase, and their uses. Methods of distribution.

Cables, conductors and general methods of erecting, laying, and insulating.

Arc lamps.—Various methods of automatic control. Open and enclosed arcs.

Glow Lamps.—General methods of manufacture of filaments, methods of exhaustion, high and low voltage lamps, efficiency tests.

Electric welding.

Electric traction.—Series, parallel, multiple unit and other systems.

Restriction and protection regulation.

Practical work.

Determination of properties of alternating currents with special reference to angle of lag, relationship between impedance, resistance, frequency and self-induction; effects of capacity in alternating circuits,

Measurement of power and power factor in A. C. Circuits. Determination of power lost in choking coil and power saved by its use.

Testing transformer for regulation ; copper and iron losses ; no load current and watts and efficiency on non-inductive load.

Determination of characteristics of an alternator and synchronous motor.

Determination of the characteristics and efficiency of rotary converter (run from alternating current side) and induction motors.

[*Note*.—Each candidate must produce a certificate from the Principal of his College that he has completed in a satisfactory manner a practical course as laid down from time to time by the Academic Council on the recommendation of the Board of Studies and handed in a note-book containing a full record of the work. The note-book shall be submitted to the Examiners and shall be taken into consideration in awarding marks.]

R. 197.

V.—DRAWING. *

(Practical 100 Marks ; Oral and Sketching 50 Marks.)

Each candidate shall submit a complete set of detailed *working* drawings certified by the Principal of his College that they have been prepared in a satisfactory manner within the walls of the College and the reports.

The drawing shall consist of four complete sets of detailed working drawings in pencil of simple machinery, and calculations in the form of reports.

The drawings and reports shall be submitted to the Examiners and marks shall be awarded as follows :—

40 per cent. for draftsmanship, hand printing, and dimensioning.

40 per cent. for details, and 20 per cent. for the reports.

The practical examination shall consist of :—

(a) An oral test with general questions on the designs and the reports.

(b) Sketching.

Marks shall be awarded as follows :—

25 for the oral, 25 for sketching.

R. 198.

VI.—WORKSHOP APPLIANCES AND PRACTICE.

(One Paper and Practical.)

(Paper 50 Marks ; Practical 100 Marks.)

(a) Workshop Appliances.—Materials used in the construction of machines. Hand tools for metal and wood. Shaping, drilling, planing, slotting, punching, and shearing machines.

Distribution of motive power by gearing, belt, friction, textile rope, wire-rope and toothed wheels.

* When once a set of Drawings has been submitted for the examination and marked, that marking will be carried on to subsequent examinations unless new Drawings are presented.

Bearings, journals, hangers, cranes and crane chains.

Erection of plants, foundation, levelling, piping.

(b) *Workshop practice*.—Pattern making, foundry and smithy, preparation and tempering of cutting tools.

Practice on lathes, planing, slotting and milling machines. Gear and screw cutting. Steam, gas, and oil engines and boiler tending.

- R. 199. The regulations regarding the standard for pass, class and exemption as also those for the publication of the results, etc., are the same as those for the B. E. (Civil) Examination (page 273).

CHAPTER XXI.—MASTER OF ENGINEERING (CIVIL, MECHANICAL OR ELECTRICAL).

Admission.

- O. 246. Each candidate must have obtained the degree of Bachelor of Engineering in the University of Bombay or any other University recognized by it and must have practised as a Civil, Mechanical or Electrical Engineer for at least three years after receiving his degree.

- O. 247. On a new application being submitted and a fresh fee paid, a candidate who has already passed the examination in one subject may appear on the same conditions on a subsequent occasion in a different branch.

- R. 200. The Degree may be obtained in two ways :—

(a) A candidate may submit with due authentication a full report of such Civil, Mechanical or Electrical Engineering work as may have been designed or executed by himself, together with the necessary working drawings and specifications. Copies of any publications which he has made subsequent to his graduation may also be submitted. Such report with all its accompaniments will be submitted to a referee or referees appointed by the Syndicate, who shall consider whether the work is original enough and of sufficiently high merit to warrant the conferring of the degree without the ordinary examination. The referee or referees shall have the option of calling the candidate and examining him orally or by setting a paper in connection with the work presented by the candidate.

(b) A candidate may submit a detailed account of any practical work or any research carried out by him since graduation, in any of the following branches of Engineering (Civil, Mechanical or Electrical) approved by the Academic Council on the recommendation of the Board of Engineering Studies, and submit to an examination in the branch in which he has thus specialized :—

- (1) Building Materials and Construction and Structural Engineering,

- (2) Bridges and Railways,
- (3) Hydraulics and Irrigation,
- (4) Municipal Engineering and Town Planning,
- (5) Steam Engine and Turbine, construction and design,
- (6) Internal Combustion Engine, construction and design,
- (7) Machine Tools, construction and design,
- (8) Hydraulic Machinery, construction and design,
- (9) Generation, Transmission and Distribution of Electrical Energy,
- (10) Electrical Power and Lighting,
- (11) Design of Electrical Machinery, Apparatus and Instruments,

or

- (12) any other branch of Engineering approved by the Academic Council on the recommendation of the Board of Studies.

R. 201. Examination in each case will be determined in the main by the candidate's own work and he will be expected to show a thorough knowledge on the practical and working side of the special subject selected by him. In addition, he will be expected to show a general acquaintance with the whole branch of Engineering which includes his subject. The Examiners shall have full discretion to impose such written, oral, or practical test as may be considered necessary by them.

BACHELOR OF LAWS.

GENERAL.

O. 248. Candidates for the Degree of LL.B. must have obtained the Degree of B.A. or B.Sc. in this University, or in a University recognized by this University, and will be required to pass two examinations in Law, the first to be called the First Examination for the Degree of LL.B., and the second, the Second Examination for the Degree of LL.B.

CHAPTER XXII.—FIRST LL. B. EXAMINATION.

Admission.

O. 249. No candidate will be admitted to this examination unless he shall have obtained the Degree of B.A. or B.Sc. in this University, or in a University recognized by this University, and have, after passing the examination for the said Degree, kept two terms in a Law College affiliated to this University.

R. 202. Candidates will be examined in the following subjects :—

First Paper	... Roman Law.
Second Paper	... Jurisprudence.
Third Paper	... Constitutional Law.
Fourth Paper	... The Law of Contracts and Torts.
Fifth Paper	... The Law of Crimes and Criminal Procedure Code.

- R. 203. Text-books in these subjects will be prescribed or recommended from time to time by the Academic Council on the recommendation of the Board of Studies.

Standard for Passing the Examination.

- R. 204. To pass the examination the candidate must (a) obtain one-third of the full marks in each paper, and (b) obtain one-half of the total marks obtainable. Should a candidate, however, fail to obtain the prescribed minimum for passing in one paper only, he shall be declared to have passed the examination if, on a review of his marks, a majority of not less than two-thirds of the Examiners present at the final meeting decide that he should pass: Provided always that no candidate shall so pass unless he obtains at least 60 per cent. of the total marks in all papers. Those of the successful candidates who obtain two-thirds of the total marks obtainable will be placed in the First Class.
- R. 205.* A candidate who has obtained 50 per cent. marks separately in two or more papers at any one examination may, at his option, be exempted from appearing in those papers at a subsequent examination and will be declared to have passed the examination when he passes in the remaining papers: Provided that in the paper or papers in which he appears on the last occasion he must obtain the minimum in each paper and the percentage of the total marks in such paper or papers required by Regulation 204. Such candidates will not be eligible for a class, prize or scholarship awarded at the examination.

CHAPTER XXIII.—SECOND LL. B. EXAMINATION.

Admission.

- O. 250. No candidate will be admitted to this examination unless he shall have passed the First Examination for the Degree of LL.B. in this University, and, after passing the said examination, shall have kept two terms in a Law College affiliated to this University.
- O. 251. A student who has passed in all subjects but one at the First LL.B. Examination in conformity with Regulation 205 will be allowed to keep terms and to appear for the Second LL.B. Examination after keeping two terms, but will not be declared to have passed the Second LL.B. Examination under any circumstances, unless he has passed in the remaining subject of the First LL.B. Examination held either in a previous, or in the same, examination season.
- R. 206. Candidates will be examined in the following subjects:—
- | | |
|--------------|--|
| First Paper | ... Succession and Family Rights, with special reference to Hindu and Mahomedan Law. |
| Second Paper | ... The Law of Property (including the Law of Transfer), the Law of Easements and the following Land Tenures, viz., Ryotwari, Watans, Saranjams and Inams. |

*This regulation has come into operation from January 1928 and does not affect exemptions from single papers earned under the old regulation.

Third Paper	...	Equity, with special reference to the Law of Trusts and Specific Relief.
Fourth Paper	...	The Law of Evidence, Civil Procedure and Limitation.
Fifth Paper	...	Company Law and the Law of Insolvency.

R. 207. Text-books in these subjects will be prescribed or recommended from time to time by the Academic Council on the recommendation of the Board of Studies.

Standard for Passing the Examination.

R. 208. To pass the examination the candidate must (a) obtain one-third of the full marks in each paper, and (b) obtain one-half of the total marks obtainable. Should a candidate, however, fail to obtain the prescribed minimum for passing in one paper only, he shall be declared to have passed the examination if, on a review of his marks, a majority of not less than two-thirds of the Examiners present at the final meeting decide that he should pass: Provided always that no candidate shall so pass unless he obtains at least 60 per cent. of the total marks in all papers. Those of the successful candidates who obtain two-thirds of the total marks obtainable will be placed in the First Class.

R. 209.* A candidate who has obtained 50 per cent. marks separately in two or more papers at any one examination may, at his option, be exempted from appearing in those papers at a subsequent examination and will be declared to have passed the examination when he passes in the remaining papers: Provided that in the paper or papers in which he appears on the last occasion he must obtain the minimum in each paper and the percentage of the total marks in such paper or papers required by Regulation 208. Such candidates will not be eligible for a class, prize or scholarship awarded at the examination.

CHAPTER XXIV.—EXAMINATION FOR THE DEGREE
OF LL.M.

Admission.

O. 252. No candidate shall be admitted to the examination for the Degree of LL.M. unless he has passed, not less than two years previously, the Second Examination for the Degree of Bachelor of Laws in this University or a Degree examination in Law in some other University accepted by the Academic Council as equivalent thereto.

R. 210. Candidates will be examined in any one of the following four branches:—

BRANCH I.

First Paper	...	Jurisprudence.
Second Paper	...	Roman Law.
Third Paper	...	International Law (Public).
Fourth Paper	...	International Law (Private).

* This regulation has come into operation from January 1928 and does not affect exemptions from single papers earned under the old regulation.

Fifth Paper	...	Principles of Legislation.
Sixth Paper	...	Constitutional Law (British and Indian).
BRANCH II.		
First and Second Papers.		Hindu Law.
Third and Fourth Papers.		Mahomedan Law.
Fifth Paper	...	The Law of Wills.
Sixth Paper	...	The Law of Marriage and Succession in British India.
BRANCH III.		
First and Second Papers.		Real Property (including the Law of Vendors and Purchasers, Mortgages, Gifts and Leases, and the Law relating to Mines and Minerals, Foreshore and Seashore).
Third Paper	...	Principles of Equity, with special reference to the Law of Trusts and Specific Relief.
Fourth Paper	...	The Law of Easements and Prescription.
Fifth and Sixth Papers.	Pa-	Customary and Statute Law relating to Land Tenure in British India.
BRANCH IV.		
First Paper	...	The Law of Contracts in General.
Second Paper	...	The Law of Agency, Partnership and Companies.
Third Paper	...	Mercantile Law.
Fourth Paper	...	Maritime Law.
Fifth Paper	...	The Law of Torts.
Sixth Paper	...	The Law of Crimes.

Standard for Passing the Examination.

- R. 211.** To pass the examination the candidate must obtain 50 per cent. of the full marks in each paper. Those of the successful candidates who obtain 66 per cent. of the total marks obtainable will be placed in the First Class.

M. B., B. S.

GENERAL.

- O. 253.** A candidate for the degrees of M. B., B. S. must have passed the Intermediate Examination in Science of this University in the group of Physics, Chemistry and Biology or an equivalent examination of another recognized University before being eligible for admission to a Medical College affiliated to the University.

O. 254. The academic year for medical students shall consist of three terms, each of twelve weeks' duration, *viz.* :—

- (i) The Monsoon term commencing on the 4th June and ending on the 26th August.
- (ii) The Winter term commencing on the 24th September and ending on the 16th December.
- (iii) The Spring term commencing on the 14th January and ending on the 7th April.

O. 255. Candidates for the degrees of M. B., B. S. shall be required to pass three examinations, namely :—

- (i) First M. B., B. S. Examination—
(Anatomy & Physiology)
- (ii) Second M. B., B. S. Examination—
(Pharmacology & Materia Medica)
- (iii) Third M. B., B. S. Examination—

Groups A & B.

Subjects of Group A are—

- 1. Medicine.
- 2. Pathology.
- 3. Forensic and Preventive Medicine.

Subjects of Group B are—

- 1. Surgery.
- 2. Ophthalmology.
- 3. Midwifery and Gynæcology.

O. 256. Only those candidates shall be eligible for University awards who pass at the main session of the First, Second and Third M.B., B.S. Examinations.

CHAPTER XXV.—THE FIRST EXAMINATION FOR THE DEGREE OF M. B., B. S.

Admission.

O. 257. Candidates before presenting themselves for the First Examination shall produce certificates of having completely attended the following courses to the satisfaction of the Dean or Head of the College :—

i. In Human Anatomy and Embryology—

- (a) A complete course of lectures and demonstration on Human Anatomy and Embryology, with special reference to their application to Medicine and Surgery, extending over five terms.
- (b) A course of dissections of the entire body extending over five terms. In this course the student must have dissected the whole body to the satisfaction of his teacher.

ii. In Physiology—

- (a) A complete course of lectures and demonstrations on Physiology extending over five terms.

- (b) A practical course of Histology, Experimental Physiology and Physiological Chemistry extending over three terms.

iii. In Organic Chemistry and Bio-Physics—

A course of lectures and practical work extending over two terms.

O. 258. Failure to pass the examination will not debar the candidate from appearing at any subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate showing that he has, during the interval between the declaration of his failure and subsequent re-appearance at the examination, pursued a further course of study in the subjects of the examination to the satisfaction of the Dean or Head of a Medical College recognized by the University.

R. 212. The subjects of the First M. B., B. S. Examination are—
 (1) Anatomy including Embryology.
 (2) (a) Physiology including Histology, Chemical and Experimental Physiology.
 (b) Organic Chemistry and Bio-Physics.

R. 213. The examination shall consist of two written papers and a practical or an oral test or both in each subject.

Syllabus.

R. 214. BIO-PHYSICS.

The Gas Laws :—Boyle's Law. Gay-Lussac's Law. Normal temperature and pressure. Avogadro's Theorem. The general gas equation. Diffusion of gases and the Kinetic Theory. Deviation from Boyle's Law.

The Laws of Solution :—Water as a solvent. —Solubility of gases.—Henry's Law. Solubility of gases in aqueous solutions. Solubility of liquids. Solubility of solids. Electrolytic and non-electrolytic solutions.

Surface Tension :—Determination of surface tension—formation of emulsions. Reversal of emulsions. Surface tension of aqueous solutions. Practical applications. Gibbs-Thomson Theorem.

Viscosity :—Its measurement. Viscosity of the blood.

Diffusion and Osmotic Pressure :—Measurement of Osmotic pressure. Mode of action of semi-permeable membranes. Indirect measurement of Osmotic Pressure. Osmotic Pressure in the living organism.

The behaviour of electrolytes in solution :—The theory of Electrolytic dissociation. Theory of ionisation and electrolysis. Conductivity of solutions. The mobilities of ions. Bio-Chemical action of ions.

The Law of Mass Action :—Balanced and reversible reactions, its applications,

Hydrion :—Determination of the concentration of hydrion :—

1. Electrometric method; 2. Indicator method—Buffer solutions—Bacteriological applications.

The Colloidal State :—Crystalloids and Colloids—Suspensoids and emulsoids—The Ultra-microscope—Brownian movement—Formation of gels—Imbibition.

Adsorption :—Adsorption of a solid from a solution—Adsorption saturation—some examples of adsorption—Electrostatic adsorption—some biological applications.

The Permeability of the Cell Membrane :—Changes in this permeability—Nature of the Cell Membrane.

The Compound Microscope and Polarimetry.

Electricity and Magnetism : Cells—Galvanism and Faradism—Construction and uses of string galvanometer and capillary electrometer—Du Bois Raymond's induction coil—Rheocord-Pohl's Commutator—Thermo-electricity.

R. 215.

BIO-CHEMISTRY.

(Practical Work and Demonstrations.)

1. Proteins.

Their definition, classification, general reactions, colour reactions. Heat coagulation of Albumins and Globulins. The properties of Albumins and Globulins. The Chemistry of Egg, white Metaproteins, Albumoses and peptones. Glucoproteins. Reactions of certain Albuminoids, *e.g.* Gelatine and Keratin.

2. Nucleoprotein, Nucleins and Nucleic acids (Demonstrations).

3. The preparation and properties of Amino-acids (Demonstrations).

4. The Carbohydrates.

The Monosaccharides, disaccharides, Polysaccharides—Quantitative estimation of carbohydrates. The theory and use of the Polarimeter (Demonstration). Optical activity and the asymmetric Carbon Atom (Demonstration).

5. The Chemistry of some foods—

Milk, Flour, Bread and Meat (Muscle).

6. The composition of the Digestive juices and the actions of Enzymes :—

Saliva, Ptyalin, Gastric Juice, Pepsin, Rennin, Trypsin (Demonstration). Amylopsin (Demonstration). Autolysis (Demonstration).

7. The coagulation of blood (Demonstration).

8. The red blood corpuscles and the blood pigments—

The lacking of blood. Hæmoglobin and its derivatives.

Spectroscopy of blood pigments.

9. The constituents of Bile.

10. The Urine and its constituents,

The average composition. Physical chemistry of urine. The pigments of urine. The inorganic constituents.—Urea. Uric acid. Purin. Bases other than uric acid. Creatinine and creatine. Ammonia.

Hippuric acid.

Certain constituents of abnormal urine, *e.g.* Albumin and Globulin. Albumoses. Bence-Jones' Protein. Blood pigments, Bile, Glucose, Pentose, Lactose, Acetone bodies, Glycuronic acid.

Urinary sediments.

11. Quantitative analysis of urine.

Total nitrogen, Ammonia. Ammonia and Amino acids, Urea, Creatinine and creatine (Demonstration), Uric acid, Glucose, Acetone Bodies (Demonstration), Chlorides, Phosphates, Sulphates (Demonstration), Albumin, Diastase.

12. The analysis of Blood.

Glucose and Urea.

Calcium (Demonstration).

13. Detection of substances of Physiological interest.

(a) Fluids.

(b) Solids.

R. 216.

ORGANIC CHEMISTRY.

(*Practical Work*).

1. Detection of the following elements—
Carbon, Hydrogen, Nitrogen, Sulphur, Phosphorus, Iron, Halogens.

2. Exercises involving crystallization, distillation, extraction with solvents, and determination of melting points and boiling points.

3. Preparations—

(a) Preparation and Hydrolysis of an ester and an amide.

(b) The preparation of fatty acid from a fat.

(c) Determination of a fatty acid from a fat.

(d) Determination of the molecular weight, by a fatty acid, and by titration.

(e) Preparation of osazones.

(f) Benzoylation.

4. Estimation—

Nitrogen, by Kjeldahl's method.

Estimation of Carbon.

Standard for Passing the Examination.

R. 217.

To pass the examination the candidate shall obtain in each subject 50 per cent. of the full marks in the practical test, 40 per cent. in the written test and 50 per cent. in the written and practical tests taken together. Those of the successful candidates who obtain 66 per cent. of the total marks obtainable shall be placed in the First Class.

- R. 218.** A candidate who obtains 50 per cent. of the full marks in the practical test in either Anatomy or Physiology, 40 per cent. in the written test and 60 per cent. in the written and practical tests taken together, may, at his option, be excused from appearing in that subject at a subsequent examination. But he shall not be declared to have passed the whole examination until he has passed in both the subjects of the examination. Candidates passing the examination in this manner in compartments shall not be eligible for a class.
- R. 219.** The subject or subjects in which any successful candidate may have distinguished himself will be shown on the list. In order to obtain distinction in any subject the student should pass the examination at the first attempt in all the subjects, and obtain 75 per cent. of the full marks in the subjects.
- R. 220.** Only those candidates who have passed the whole examination at one time will be eligible for marks of distinction or for any prize or scholarship to be awarded at the examination.

CHAPTER XXVI.—THE SECOND EXAMINATION FOR THE DEGREES OF M.B., B.S.

Admission.

- O. 259.** No candidate shall be admitted to the Second M.B., B.S. Examination unless he has passed the First M.B., B.S. Examination and shall have been engaged in medical studies at a Medical College recognized by this University and completed satisfactorily at least three terms after passing that examination.
- O. 260.** Before admission to the Second Examination each candidate shall present certificates of satisfactory attendance on the following courses to the satisfaction of the Dean or Head of the College :—
- In Pharmacology and Materia Medica—**
- A course of lectures and demonstrations extending over two terms.
- In Practical Pharmacy—**
- A course of demonstrations and practical work extending over one term.
- O. 261.** Failure to pass the examination will not debar the candidate from appearing at any subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate showing that he has, during the interval between the declaration of his failure and subsequent re-appearance at the examination, pursued a further course of study in the subjects of the examination to the satisfaction of the Dean or Head of a Medical College recognized by the University.
- R. 221.** Candidates shall be examined in the following subjects :—
- Pharmacology, Materia Medica and Practical Pharmacy.
- R. 222.** The examination shall consist of a written paper and a practical or an oral test or both.

Syllabus.

R. 223.

PHARMACOLOGY AND MATERIA MEDICA.

(A) *Pharmacology*.—A course consisting of—

- (a) The pharmacological action of drugs and other medicinal agents upon the lower organisms and the chief functions of the animal body, *viz.*, Blood Formation; Circulation; Respiration; Digestion and Absorption; Secretion and Excretion; Metabolism; Heat Regulation; Motor, Sensory and reflex mechanisms;
- (b) Distribution and changes undergone in the body by the principal medicinal substances;
- (c) Chemical characters of drugs, in so far as they are of pharmacological importance, especially, of the following:—
Opium, Atropine, Cocaine and newer local anæsthetics, Strychnine, Caffeine, Hypnotics, Antipyretics, Salicine, Salicylates, Volatile oils and Fixed oils, Heavy metals, Tannin, and Arsenic;
- (d) Physical properties of drugs in so far as they are of practical importance in Medicine.

Note :—The candidates will not be expected to study all the drugs and their preparations in the B. P. but only those, at present, in common use. Pharmaceutical details as to the modes of preparations of drugs will not form a part of the examination.

(B) *Pharmacy*.—Prescriptions—reading, construction and incompatibilities,

Posology of pharmacopæial preparations,

Weights and measures including the Metric system,

Dispensing.

Note :—The students should keep a record of all the practical work done by them in their class in Pharmacy and this record should be shown to the Examiners at the time of the University Examination.

(C) List of drugs and preparations to be identified by the candidates.

Acidum Carbolicum.

Acidum Salicylicum.

Acaciæ Gummi.

Aconiti Radix.

Alcæ.

Aloinum.

Ammonii Carbonas.

Ammoniacum.

Amyl Nitris.

Antimonium Sulphuratum.

Argenti Nitras.

Arsenii Iodidum rubrum.

Asafetida.

Amyl Nitris.

Belladonnæ Radix.

Buchu Folia.

Calumba Radix.

Calx chlorinata.

Camphora and Linimentum

Camphoræ Ammoniatum.

Cannabis Indica.

Carbo Ligni.

Cascara Sagrada.

Catechu.

Cloroformum.

Chloral Hydras.

Cinchonæ Rubræ Cortex.	Ipecacuanhæ Radix.
Creosotum.	Jalapa.
Cupri Sulphas.	Kino.
Cubebæ Fructus.	Myrrha.
Colocynthis Pulpa.	Nux Vomica.
Colchici Cormus.	Oleum Menthæ Piperitæ.
Copaiba.	Oleum Morrhuæ.
Datura Semina.	Oleum Santali.
Digitalis Folia.	Oleum Terebinthinæ.
Ergota.	Opium.
Ether.	Paraldehydum.
Ethyl Chloride.	Paraffinum Molle.
Ferri Carbonas Saccharatus.	Phosphorus.
Ferri et Ammonii citras.	Plumbi Iodidum.
Ferrum Redactum.	Plumbi Oxidum.
Ferri Sulphas.	Potassii Permanganas.
Ferri Phosphas Saccharatus.	Quassia Lignum.
Felix Mass.	Rhei Radix.
Gentiana Radix.	Scilla.
Glycerinum.	Sena folia.
Guiaici Resina.	Spiritus Ammonia Aromaticus.
Hydrargyrum.	Spiritus Rectificatus.
Hydrargyrum cum creta.	Spiritus Etheris Nitrosi.
Hydrargyrum Iodidum Rubrum	Sulphur.
Hydrargyrum Oxidum Flavum.	Sulphur precipitatum.
Hydrargyrum Oxidum Rubrum.	Strophanthi Semina.
Hydrargyrum Perchloridum.	Thymol.
Hydrargyrum Subchloridum.	Tragacanth.
Iodum.	Uvæ Ursi Folia.
Iodoformum.	

Standard for Passing the Examination.

R. 224. To pass the examination the candidate shall obtain 50 per cent. of the full marks in the practical or oral test, 40 per cent. in the written test and 50 per cent. in the written and oral tests taken together.

R. 225. A special mark will be placed against the names of those candidates who have distinguished themselves in the examination. In order to obtain distinction, the student should pass the examination at the first attempt and obtain 75 per cent. of the full marks in the subject.

CHAPTER XXVII.—THE THIRD EXAMINATION FOR THE DEGREES OF M.B., B.S.

[Under the old regulations the Final M.B., B.S. Examination in Part II will be held for the last time in April 1931. For Regulations, *vide* APPENDIX C.]

Admission.

O. 262. No candidate shall be admitted to the Third M.B., B.S. Examination unless he has passed the Second M.B., B.S. Examination and shall have been engaged in medical studies at a Medical College recognized by this University for at least one clear term after passing

the Second M.B., B.S. Examination and for at least nine terms (three years) after passing the First M.B., B.S. Examination.

O. 263.

Before admission to the Third M.B., B.S. Examination, each candidate shall present certificates of having satisfactorily attended the following courses to the satisfaction of the Dean or the Head of the College :—

i. In Medicine—

- (a) A course of lectures and clinical demonstrations in Medicine including Diseases of Children and Therapeutics extending over six terms.
- (b) An appointment of six months as Clinical Clerk in the medical wards of a recognized hospital.
- (c) An appointment for three months as Clinical Clerk in the medical out-patient department of a recognized hospital.

The course of instruction in Medicine shall include the practice of Clinical Pathology and laboratory methods and the application of Physiology and Anatomy to the investigation of disease.

- (d) Every candidate shall also present evidence of having received instruction in the following subjects :—
 - (i) Fevers. (This course must be taken at a recognized Infectious Diseases Hospital for a period of three months.)
 - (ii) Tuberculosis.
 - (iii) Mental Diseases. (This course must be taken at a recognized Mental Hospital and shall consist of not less than 10 lectures and demonstrations.)
 - (iv) Dermatology.
 - (v) Practical instruction in Vaccination from one of the authorised Vaccinators.

ii. In Surgery—

- (a) A course of lectures and clinical demonstrations extending over six terms.
- (b) A course of practical instruction in Operative Surgery including operations on the cadaver to be performed by the students themselves, extending over a period of two terms.
- (c) An appointment for six months as Surgical Dresser in the wards of a recognized hospital.
- (d) An appointment for three months as Surgical Dresser in the out-patient department of a recognized hospital.

The course of instruction in Surgery shall include instruction in Surgical Pathology and the application of Physiology and Anatomy to the investigation of diseases.

(e) Every candidate shall also present evidence of having received adequate instruction in the following subjects :—

- (i) Administration of Anæsthetics. (Each candidate shall be certified to have administered anæsthetics on, at least, ten occasions.)
- (ii) Dental Surgery.
- (iii) Radiology.
- (iv) Venereal Diseases.
- (v) Diseases of Ear, Nose and Throat.

iii. In Midwifery and Diseases of Women—

- (a) A course of lectures and clinical demonstrations extending over four terms.
- (b) An appointment for six months as a Clinical Clerk in Maternity and Gynæcological wards, during which period he must have conducted ten labour cases in a recognized Maternity Hospital or in the lying-in-wards of a General Hospital under the supervision of a qualified member of the medical staff, and subsequently conducted under adequate supervision further ten cases of labour; he shall have also attended during this period Gynæcological out-patients and ante-natal clinic at recognized institutions.

iv. In Ophthalmology—

- (a) A course of lectures and clinical demonstrations extending over one term.
- (b) An attendance for three months in the Ophthalmic out-patient department and wards of a recognized hospital.

v. In Pathology—

- (a) A course of lectures, demonstrations and practical work in Pathology extending over two terms.
- (b) A course of lectures, demonstrations and practical work in Bacteriology and elementary Parasitology extending over two terms.
- (c) A certificate of attendance as a *post-mortem* clerk for one term.

The candidates will be required to submit to the Examiners full records of ten autopsies which they have attended and which have been certified by the teachers in that subject.

vi. In Forensic Medicine—

A course of instruction in Forensic Medicine and Toxicology including demonstrations extending over two terms.

vii. In Preventive Medicine—

A course of instruction in Preventive Medicine including demonstrations extending over one term.

R. 226.

Failure to pass the examination in either group will not debar the candidate from appearing at any subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate showing that he has, during the interval between the declaration of his failure and subsequent re-appearance at the examination, pursued a further course of study in the subjects of the examination to the satisfaction of the Dean or Head of a Medical College recognized by the University.

Explanation: The expression 'Course of study' in the above Regulation shall not be deemed to include 'systematic lectures.'

R. 227.

The subjects in which the candidates will be examined are divided into two groups which may be taken together or separately.

Group A—**(1) Medicine—**

The examination in Medicine will consist of—

- (a) Two papers each of three hours' duration.
- (b) A clinical examination in Medicine consisting of the following :—
 - (i) An examination of a patient and written report thereon for which one hour and a half will be allowed.
 - (ii) A short examination on one or more cases.
- (c) An oral examination.

(2) Pathology—

The examination in Pathology will consist of—

- (a) One paper of three hours' duration.
- (b) A practical examination.
- (c) An oral examination.

(3) Forensic and Preventive Medicine—

The examination in Forensic and Preventive Medicine will consist of—

- (a) A paper of three hours' duration.
- (b) An oral examination in each subject including questions on specimens and appliances.

Group B—**(1) Surgery—**

The examination in Surgery will consist of—

- (a) Two papers each of three hours' duration.
- (b) A clinical examination.
- (c) An oral examination bearing on Surgical Anatomy, Pathology and appliances.
- (d) Operations on the cadaver.

(2) Ophthalmology—

The examination in Ophthalmology will consist of—

- (a) A paper of two hours' duration.
- (b) A clinical oral examination.

(3) *Midwifery and Gynæcology*—

The examination in Midwifery and Gynæcology will consist of—

(a) A paper of three hours' duration.

(b) An oral examination including questions on specimens and appliances.

- R. 228. Candidates who pass in all subjects but one of Groups A and B at the same time, will be exempted from a future examination in the subjects in which they have passed.

Syllabus.

R. 229.

FORENSIC MEDICINE.

Criminal Procedure,

Evidence,

Identification, Systems of determination of age,

Signs of death,

Modes of death,

Post-mortem examination for medico-legal purposes,

Sudden death from natural causes,

Wounds, medico-legal aspect of,

Wounds, examination of, for medico-legal purposes,

Wounds, Suicidal, Accidental or Homicidal.

Death from—

Asphyxia,

Starvation and cold,

Heat, Dry and Moist.

Lightning and Electricity,

Virginity, Pregnancy, Delivery, Legitimacy, Impotence, Sterility,

Abortion, Criminal,

Infanticide,

Rape, etc.

Examination of Blood Stains, Seminal Stains and Hairs.

Poison, Definition of a,

Modes of action of poisons,

Modifications of actions of poisons,

Evidence of poisoning,

Classification of poisons.

Poisons—I. Organic,

II. Inorganic,

Symptoms and signs of poisoning in the Living and in the Dead,

Treatment for poisoning,

Post-mortem examination in cases of poisoning,

Differential diagnosis of poisoning,

Duty of the medical man in cases of poisoning.

Attendance at, at least, 12 medico-legal *post-mortem* examinations.

R. 230.

PREVENTIVE MEDICINE.

I.—*The health of man.*—The Principles of personal hygiene as regards exercise, rest and sleep, habits, cleanliness and clothing. The nature, origin and purpose of food. Animal and vegetable foodstuffs. Vegetarianism. Beverages, stimulants and condiments. Diseases attributed to excess or deficiency of food and to various foodstuffs. The principles of diets and dieting.

II.—*The health of man's dwelling.*—Selection of building sites and the principles regulating the sanitary construction, ventilation, warming and cooling of dwellings. Impurities in air, general effects of vitiated air on respiration and diseases produced by impurities in the air.

III.—*The health of the city.*—Sources of water-supply. The collection, distribution and storage of water including materials used for these purposes. The purification of water without filtration and with filtration. Filter beds and domestic filters. The collection and forwarding of water sample for chemical and bacteriological analysis. Sewage. Sewage removed by the water-carriage system and by dry methods. The disposal of sewage, cesspools, discharge into rivers of sea, chemical treatment, land treatment, and biological treatment. The collection and disposal of refuse.

IV.—*The health of the community.*—Infective diseases, their causes and prevention. Vaccination, isolation, segregation and quarantine. Deodorants, antiseptics and disinfectants and the methods of employing disinfectants. Diseases of occupation. Legal obligations of medical practitioners under public health regulations. Maternity and child welfare and school hygiene.

V.—*The elements of vital statistics.*—Calculation of population, birth and death rates. Causes and prevention of infant mortality.

VI.—*Meteorology and climatology.*—Atmospheric pressure, temperature and humidity. Barometers, hygrometers, thermometers, anemometers, and the rain-gauge.

R. 231.

MENTAL DISEASES.

Normal Psychology; Sensation, Perception, Idea, Attention, Affection, Emotion, Conation, Instinct, Habit, Reflex action.

Association of Ideas, Memory, Judgment and Reasoning, Belief, Reaction, Time.

Causation of Insanity—Classification, general Symptomology.

Illusions—Hallucinations—Delusions—Abnormal Habits—Impulsive Acts—Fatigue—Jealousy.

Mania, Melancholia, Manic-Depressive Insanity, Parania, Stupor, Dementia Præcox, Epochal Insanities. Puerperal, Climateric, Senile Intoxication — Psychoses — Alcoholism — Morphinism — Cocainism — General Paralysis of the insane — Acute Hallucinatory Psychosis — Epilepsy — Psychosthenia — Idiocy and Imbecility.

Feigned Insanity.

Relationship of Insanity with law.

Standard for Passing the Examination.

- R. 232.** To pass the examination the candidate shall obtain in each subject 50 per cent. of the full marks in the clinical practical and oral tests, 40 per cent. in the written and 50 per cent. in the written and the clinical practical and oral taken together. Those of the successful candidates who obtain 66 per cent. of the total marks obtainable shall be placed in the First Class.
- R. 233.** A candidate who obtains 50 per cent. of the full marks in the practical, clinical, and oral tests in any subject, 40 per cent. in the written test and 60 per cent. in the written and practical, clinical and oral tests taken together, may, at his option, be excused from appearing in that subject at a subsequent examination but he shall not be declared to have passed the whole examination until he has passed in all the subjects of the examination. Candidates passing the examination in this manner in compartments shall not be eligible for a class.
- R. 234.** The subject or subjects in which any successful candidate may have distinguished himself will be shown on the list. In order to obtain distinction in any subject the candidate should pass the examination at the first attempt in all the subjects, and obtain 75 per cent. of the full marks in the subject.
- R. 235.** Only those candidates who have passed the whole examination at one time will be eligible for distinction or for any prize or scholarship to be awarded at the examination.

TRANSITORY PROVISIONS.

1. A candidate admitted to the Intermediate Class of a Medical College in or before June 1923 shall only be required to complete the courses of study laid down in the "old regulations": provided he shall have completed to the satisfaction of the Head of the Medical College the courses as therein laid down, he shall be eligible to sit for the Intermediate Examination after two years, and when successful at that examination, be eligible to sit for the final examination after a further two years; and should no examination under the old regulations be held at the time at which he would be eligible to sit, he shall be permitted to appear for the corresponding examination under the new regulations without completing any further terms or any additional courses of study and with any exemptions previously earned.

2. For the purpose of this rule—

(i) The First Examination for the M. B., B. S. Degrees under the new regulations will be held to correspond with the Intermediate Examination under the old regulations except as regards Materia Medica, Pharmacology and Pharmacy; and furthermore, any candidate who shall have passed the Intermediate Examination under the old regulations, or shall have been exempted from sitting again therein in Materia Medica, Pharmacology and Practical Pharmacy, shall be exempted from sitting in or keeping terms in those subjects at any subsequent examination conducted by the University; and any candidate who shall have passed the Intermediate Examination under the old regulations in Anatomy and Physiology but shall

have failed in Materia Medica, Pharmacology and Practical Pharmacy, shall be eligible to keep terms for the Final (Third) M.B., B.S. Examination and shall be eligible without keeping any further terms in these subjects to sit for the Second Examination for the Degrees of M.B., B.S.

(ii) Groups A and B of the Third M.B., B.S. Examination taken simultaneously shall together be held to correspond to the Final M.B., B.S. Parts I and II (*vide* Appendix C.)

3. Part II of the Final M.B., B.S. Examination will be held for the last time in April 1931.

4. Students who have passed in Part I Final M.B., B.S. Examination will be exempted from the Second M.B., B.S. Examination in Materia Medica, Pharmacology and Practical Pharmacy, and in the subjects of Pathology, Forensic and Preventive Medicine of Group A of the Third M.B., B.S. Examination.

5. Any exemptions earned in any subject or subjects under the old regulations will hold good.

CHAPTER XXVIII.—BACHELOR OF HYGIENE.

Admission.

O. 264. No candidate shall be admitted to this examination unless he has passed, not less than a year previously, the examination for the Degrees of Bachelor of Medicine and Surgery of this University, or of any University recognized by this University, or taken the Degree of Licentiate of Medicine and Surgery of this University and unless he produces satisfactory testimonials to the effect—

That after passing any of the examinations mentioned above—

- (a) he has attended during a period of six months courses of Practical Laboratory* Instruction in (1) Chemistry, (2) Bacteriology, (3) Animal Parasitology (including the life-history of those animals concerned in the transmission of diseases to man), and (4) the Pathology of those Diseases of Animals that are transferable to man;
- (b) he has during six months (of which at least three months shall be distinct and separate from the period of the above Laboratory Instruction) been diligently engaged in acquiring a practical knowledge of the duties, routine and

* The Laboratories recognized for the above course are—

- i. Grant Medical College Laboratories.
- ii. Seth Gordhandas Sunderdas Medical College Laboratories.
- iii. Bombay Municipal Laboratory (for Chemical purpose only).

The Laboratory instruction and practical knowledge of Public Health Administration given in any part of the United Kingdom and approved by the General Medical Council of Education will be accepted.

special, of Public Health Administration under the supervision of an approved Health Officer ;*

- (c) he has attended during three months the practice of a Hospital for Infectious Diseases of at least 50 beds at which opportunities are afforded for the study of Clinical instruction in Infectious Diseases and methods of Administration.

R. 236. The examination will be held in two parts, both of which may be passed at the same time or each separately, Part I first, and Part II afterwards. If any candidate taking both parts together passes in Part I or Part II, he will be exempted from that part of the examination in which he has passed.

Part I, which will consist of two papers and a Practical Examination in the Laboratory work and *viva voce* examination, will have reference to the general principles of Sanitary Science and will comprise the following subjects:—

The elements of Chemistry, Physics and Geology, methods of chemical analysis, and in particular the analysis of air and water, including a knowledge of the interpretation of results. The laws of heat and the elements of pneumatics, hydrostatics and hydraulics, in their application to warming, ventilation, water-supply and drainage. The geological and other conditions determining the healthiness of sites for dwellings, sources, storage, and purification of water-supply. The elements of Meteorology in relation to health, meteorological instruments, their construction and use. Principles of building construction in their application to dwellings, factories, hospitals and schools. The disposal of sewage and refuse and the general principles of Sanitary Engineering. The reading and interpretation of Geological and Ordnance Survey Maps. Disinfectants, their chemical and bacteriological efficiency and use, Dietetics and the chemical and microscopical examination of foods, and the detection of the commoner forms of adulterations. The methods of bacteriological investigation and analysis. The bacteriology of air, water, food and soil. Animal parasitology and life-history and recognition of those animals concerned in the transmission of disease to man. The general pathology of infection and of the diseases of animals that are transmissible to man. Nature of immunity and protection from infectious diseases.

Part II, which will consist of two papers and a Practical Examination in, and reporting on, subjects connected with outdoor sanitary work and a *viva voce* examination, will have reference to State Medicine and applications of Pathology and Sanitary Science and will comprise the following subjects:—

Laws and Statutes relating to Public Health. The Model By-laws of the Local Government Board and regula-

* The Health Officers approved at present are the Health Officers of Bombay, Calcutta and Madras. The Laboratory instruction and practical knowledge of Public Health Administration given in any part of the United Kingdom and approved by the General Medical Council of Education will be accepted.

tions for prevention of Plague, Cholera, and Yellow Fever. Sanitation of dwellings, schools, factories and workshops and of villages and towns. Inspection of slaughter-houses, cow-sheds, etc. Inspection of meat and other articles of food. General epidemiology with special reference to the origin, pathology, symptoms, propagation, geographical distribution and prevention of the epidemic, endemic and other infectious diseases, both of temperate and tropical climates. The methods applicable to the medical investigation of epidemics. Effects on health of overcrowding, vitiated air, impure water, polluted soils and bad or insufficient food. Unwholesome trades and occupations and the diseases to which they give rise and the prevention of nuisances arising therefrom. Nuisances injurious or dangerous to health. Nature and origin of parasitic diseases. The effects on health of season and climate. Duties of sanitary authorities and their officers. The principles and methods of vital statistics in relation to public health.

O. 265.

The Degree will not be conferred until both parts of the examination have been passed.

CHAPTER XXIX.—DOCTOR OF MEDICINE.

Admission.

O. 266.

Every candidate for the Degree of Doctor of Medicine must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery of this University or of any University recognized by this University, or of Licentiate of Medicine and Surgery of this University, and must have passed the examination for the said Degrees not less than two years previously unless specially exempted under Ordinance 268 below.

O. 267.

Every candidate presenting himself for the M. D. Examination must send to the Registrar together with his form of entry a certificate either—

(i) of having been engaged in continuous professional practice for not less than five years, one of which at least he must have spent in post-graduate study of the particular branch in which he presents himself for the examination at a recognized Hospital or Institution, subsequently to having passed the Examination for the Degree of L. M. & S. or M. B., B. S. Degrees ;

or

(ii) of having been engaged in continuous practice in a Hospital or Institution recognized by this University for not less than three years, one of which at least he must have spent in post-graduate study of the particular branch in which he presents himself for the examination at a recognized Hospital or Institution, subsequently to having passed the examination for the Degree of L. M. & S. or M. B., B. S. Degrees ;

or

(iii) of having spent at least two years in post-graduate study of the particular branch in which he presents himself for examina-

tion at a Hospital or Institution recognized for the purpose, subsequently to having passed the examination for the Degree of L. M. & S. or M. B., B. S. Degrees ;

or

(iv) in the case of Branch I, of having held, for at least six months, an approved appointment at a Hospital recognized for the purpose, subsequently to having passed the examination for the Degree of L. M. & S. or the M. B., B. S. Degrees ;

(v) in the case of Branch II, of having held for at least twelve months an approved Pathological appointment at an Institution recognized for the purpose, subsequently to having passed the examination for the Degree of L. M. & S. or the M. B., B. S. Degrees ;

or

(vi) in the case of Branch III, of having held for at least six months an approved appointment in Obstetrics and Gynæcology at a Hospital recognized for the purpose, subsequently to having passed the examination for the Degree of L. M. & S. or M. B., B. S. Degrees.

O. 268. A candidate may present himself for the M. D. Examination after an interval of one year only from the time of passing the examination for the M. B., B. S. Degrees provided he has taken the M. B., B. S. Degrees in the First Class and spent one year in the post-graduate study of the particular branch in which he presents himself at a recognized Hospital or Institution.

O. 269. Each candidate must also produce testimonials signed by at least two Doctors of Medicine or Masters of Surgery showing that he is, in habits and character, a fit and proper person for the Degree of Doctor of Medicine.

O. 270. A candidate who fails to pass the examination, though his thesis has been accepted, must take the whole examination at any subsequent entry or may submit the same thesis or another thesis for consideration in connection with such subsequent entry for the examination.

O. 271. A candidate whose thesis has not been accepted must take the whole examination at any subsequent entry or may submit another thesis for consideration in connection with such subsequent entry for the examination.

O. 272. A candidate who takes the whole examination and fails to pass must either again take the whole examination at any subsequent entry or may submit a thesis for consideration in connection with such subsequent entry for the examination.

R. 237. The Examination in Branches I to III will consist of—

Branch I—Medicine—

One paper in Medicine, including Mental Diseases and Medical Applied Anatomy.

One paper in Tropical Medicine.

One paper in Pathology, including Bacteriology.

An essay on one of two subjects in Medicine, including the History of Medicine.

A clinical, an oral and a practical examination.

Branch II—Pathology—

Two papers in Pathology including Bacteriology.

One paper in Medicine.

An essay on one of two subjects in Pathology including History of Pathology and Bacteriology.

A Laboratory examination, including an oral, a practical and a *post-mortem* examination.

Branch III—Midwifery and Diseases of Women and Infants—

One paper in Midwifery, including the Surgical Anatomy of the Pelvis.

One paper in Diseases of Women and Children including Ante-natal Diseases.

One paper in Pathology including Bacteriology.

An essay on one of two subjects in Midwifery and Diseases of Women including History of Midwifery, Gynæcology and Infant Welfare.

A clinical, an oral and a practical examination.

- R. 238.** Any candidate for the M. D. Degree may transmit to the Registrar with his form of entry and the certificate referred to above, not less than two months before the commencement of the examination, a thesis embodying the results of his own independent research, and having definite relation to the Branch of Medicine in which he is a candidate. The candidate must indicate in what respect his thesis appears to him to advance medical knowledge or practice. If the thesis be judged of sufficient excellence by the Examiners, the candidate may be exempted from a part or from the whole of the written examination; but in *all* cases he shall be submitted to the clinical, practical and oral examinations above referred to.

CHAPTER XXX.—DOCTOR OF HYGIENE.

Admission.

- O. 273.** This examination is open only to such candidates as have passed, at least two years previously, the examination for the Degree of Bachelor of Hygiene of this University or a similar examination of any other University accepted by the Academic Council as equivalent thereto.
- O. 274.** No candidate shall be admitted to this examination unless he produces a certificate of having attended, since his obtaining the Degree of Bachelor of Hygiene, out-door and in-door work of a Medical Officer of Health for one year under the supervision of an approved Health Officer* or of having been employed for at least one year as Health Officer of a town of not less than 1,00,000 inhabitants.

*The Health Officers approved at present are the Health Officers of Bombay, Calcutta and Madras.

O. 275. Each candidate must also produce testimonials signed by at least two Doctors of Medicine or Masters of Surgery showing that he is, in habits and character, a fit and proper person for the Degree of Doctor of Hygiene.

R. 239. The examination will be conducted as follows :—
 (i) Public Health—Three papers and a Practical and an Oral Examination.
 (a) Sanitation and Sanitary Medicine—Two papers.
 (b) Practical Sanitation, including Sanitary Engineering in relation to Public Health and Vital Statistics—One paper.
 (ii) Sanitary Laws of England and India—One paper and an Oral Examination.

R. 240. Candidates will be required to show a competent knowledge of Sanitary Science in all its branches. The scope of the examination will be fuller than that for the Degree of Bachelor of Hygiene and will also include legislative measures concerning foodstuffs and control of the same in different countries; preservation of food; food during famine and its effects on health; practical sanitation, including Sanitary Engineering; personal Hygiene; clothing; physical education; Hygiene of childhood and School Hygiene; Hygiene of traffic; Hygiene of markets, fairs, famine camps, etc.; Marine Hygiene; Professional Hygiene and care of Working Classes; Demography; Geography of infectious diseases; history of previous epidemics and lessons taught by them.

R. 241. Candidates will be required to solve sanitary problems involving Mathematics up to the standard of the First Year's Course in Arts and use of Logarithms.

CHAPTER XXXI.—MASTER OF SURGERY.

Admission.

O. 276. Every candidate for the Degree of Master of Surgery must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery of this University or of any University recognized by this University, or the Degree of Licentiate of Medicine and Surgery of this University, and must have passed the examination for the said Degrees not less than two years previously unless specially exempted under Ordinance 279 below.

O. 277. Every candidate presenting himself for the M. S. Examination must send to the Registrar, together with the form of entry, a certificate either—

(i) of having been engaged in continuous professional practice for not less than five years, one of which at least he must have spent in post-graduate study of Surgery at a recognized Hospital or Institution, subsequently to having passed the examination for the Degree of L. M. & S. or the M. B., B. S. Degrees;

or

(ii) of having been engaged in continuous practice in a Hospital or Institution recognized by this University for not less than

three years, one of which at least he must have spent in post-graduate study of Surgery at a recognized Hospital or Institution, subsequently to having passed the examination for the Degree of L. M. & S. or the M. B., B. S. Degrees ;

or

(iii) of having spent at least two years in post-graduate study of Surgery at a Hospital or Institution recognized by this University, subsequently to having passed the Examination for the Degree of L. M. & S. or the M. B., B. S. Degrees ;

or

(iv) of having held for at least six months an approved appointment in Surgery at a Hospital recognized for the purpose, subsequently to having passed the examination for the Degree of L. M. & S. or the M. B., B. S. Degrees ;

and

(v) of having taken a course in Regional Anatomy and Operative Surgery on the cadaver at a recognized Institution.

O. 278. Any candidate for the M. S. Degree may transmit to the Registrar, together with his form of entry and the certificate referred to above, not less than two months before the commencement of the examination, a thesis embodying the results of his own independent research, and having definite relation to a Branch or Branches of Surgery. The candidate must indicate in what respect his thesis appears to him to advance surgical knowledge or practice. If the thesis be judged of sufficient excellence by the Examiners, the candidate may be exempted from a part or from the whole of the written examination ; but in *all* cases he shall be submitted to the clinical, practical and oral examinations and operations on the cadaver above referred to.

O. 279. A candidate may present himself for the M. S. Examination after an interval of one year only from the time of passing the examination for the M. B., B. S. Degrees, provided he has taken the M. B., B. S. Degrees in the First Class and has spent one year in the post-graduate study of Surgery and taken a course in Regional Anatomy and Operative Surgery on the cadaver at a recognized Hospital or Institution.

O. 280. A candidate must also produce testimonials signed by at least two Masters of Surgery or Doctors of Medicine showing that he is, in habits and character, a fit and proper person for the Degree of Master of Surgery.

O. 281. A candidate who fails to pass the examination, though his thesis has been accepted, must take the whole examination at any subsequent entry for the examination or may submit the same thesis or another thesis for consideration in connection with such subsequent entry for the examination.

O. 282. A candidate whose thesis has not been accepted must take the whole examination at any subsequent entry or may submit another thesis for consideration in connection with such subsequent entry for the examination.

O. 283. A candidate who takes the whole examination and fails to pass must either again take the whole examination at any subsequent entry or may submit a thesis for consideration in connection with such subsequent entry for the examination.

R. 242. The candidate shall be examined in Surgery in all its branches. The examination will consist of—

Two papers in Surgery.

One paper in Pathology including Bacteriology and Surgical Anatomy.

An essay on one of two subjects in Surgery including the History of Surgery.

A clinical examination.

Operations on the cadaver.

An Oral and Practical examination with examination of Pathological specimens and X-Ray Skiagrams.

CHAPTER XXXII.—DIPLOMA IN OPHTHALMOLOGY.

O. 284. The University shall grant a Diploma in Ophthalmology.

O. 285. The examination shall be open to Graduates in Medicine and Surgery of this University or of any University recognized by this University.

O. 286. No candidate will be admitted to this examination unless he produces a certificate showing that he, having passed the L. M. & S. Examination or having passed the M. B., B. S. Degrees Examination, has been engaged for not less than one year in the post-graduate study of Ophthalmology at a recognized hospital or institution (the course may be taken at one or several hospitals which must cover a period of one year) and on production of the following certificates :—

(a) of having attended the clinical practice of an Ophthalmic Hospital or Ophthalmic Department of a General Hospital (having at least 20 ophthalmic beds) recognized by the Bombay University for a period of 12 months, in the course of which he has been engaged in the correction of errors of refraction and study of Ophthalmic Medicine and Surgery and the relation of Ophthalmology to General Medicine. [The conditions of this certificate (a) will be fulfilled by holding the appointment as House Surgeon or House Physician or as Clinical Assistant or as Tutor or as Post-graduate at one of the above recognized hospitals, or Ophthalmic Department of a General Hospital.];

(b) of having attended at an institution recognized by the Bombay University for the purposes of the M. B., B. S. Examination—

(i) a course of study in Optics,

(ii) a course of study in the Anatomy and Physiology of the eye,

(iii) a course of study in Pathology and Bacteriology with special reference to Ophthalmic Medicine and Surgery,

(iv) a course of Ophthalmic Operative Surgery.

R. 243. The examination shall be partly written and partly *viva voce* and practical. There shall be four papers in the written examination as follows :—

- (a) Anatomy, Physiology and Optics,
- (b) Bacteriology and Pathology of the Eye,
- (c) Ophthalmic Medicine and Surgery,
- (d) The relation of Ophthalmology to General Medicine.

R. 244. The Subjects shall be—

- (a) The Anatomy and Embryology of the visual apparatus, including the contents of the orbit, the bones in the neighbourhood thereof and the central nervous system as far as it relates to vision,
- (b) The Physiology of vision,
- (c) Physiological Optics,
- (d) Errors of Refraction,
- (e) Ophthalmic medicine and Surgery,
- (f) Pathology and Bacteriology in relation to diseases of the eye,
- (g) The relation of Ophthalmology to General Medicine, and
- (h) Operative Surgery.

PART VI—MISCELLANEOUS.

CHAPTER I.—LECTURESHIPS.

O. 287.

The Wilson Philological Lectureship.

(1) The lectureship shall be called "The Wilson Philological Lectureship," in connection with which, in consecutive years, a short series of lectures shall be delivered by a competent European or Indian Scholar, annually selected for the purpose, on one of the following classes of languages and the literature in which they are embodied :—

- I.—Sanskrit and Prakrit languages derived from it.
- II.—Hebrew and the other Semitic languages.
- III.—Latin and Greek.
- IV.—English viewed in connection with Anglo-Saxon and its other sources.

(2) The Syndicate shall annually invite some eminent European or Indian Scholar to deliver a course of lectures on one or other of the

subjects above specified; or, if in any particular year it is found impossible to obtain a lecturer specially suited for such a course, the Syndicate may devote the annual interest to the provision of post-graduate lectures, to be delivered at such place and time as the Syndicate may appoint, in one or other of these languages as included in the course for the M. A. Degree.

(3) The lectures shall be delivered at such time in each year as the Syndicate may appoint.

(4) It shall be in the discretion of the Syndicate to fix the number of lectures that shall constitute the course in either of the above cases.

O. 288. The Pandit Bhagvanlal Indraji Lectureship.

(Rs. 1,000.)—A course of not fewer than six lectures to be delivered on Indian Epigraphy, Antiquities or Archæology.—Available only when the Pandit Bhagvanlal Indraji Medal and Prize have not been awarded for *four* years.

O. 289. Thakkar Vassonji Madhavji Lectureship.

(1) The Lectureship shall be called "The Thakkar Vassonji Madhavji Lectureship."

(2) The Syndicate shall annually invite a competent Indian Scholar to deliver a course of lectures on any subject connected with Gujarati Literature or the History of Gujarat.

(3) The lectures shall be delivered at such time in each year at Bombay as the Syndicate may appoint.

(4) The number of lectures shall not be less than five.

(5) The lecturer shall be paid an honorarium of Rs, 1,000 (one thousand) out of the interest of the fund of this endowment, the balance being credited to the publication account of this Lectureship.

(6) The lecturer shall hand over to the Syndicate the manuscript of the said lectures or if he has delivered the lectures from notes, then the notes after proper elaboration, which shall be at the discretion of the lecturer either in English or Gujarati, provided, however, that the Syndicate may require any particular Lecturer to furnish his manuscript in Gujarati.

(7) The copyright in the said lectures shall vest in the University.

(8) The University may from time to time, out of the income reserved for publication purposes as aforesaid, publish the lectures or any part thereof which the Syndicate deems fit for publication. It will be open to the University to receive any contributions towards the expenses of any particular publication.

(9) The said publication shall be known as "The Thakkar Vassonji Madhavji Lectures" on the Literature and History of Gujarat and, subject to any special contract which the Syndicate may make, all the rights in the said series shall remain in the University.

(10) The annual income of the fund shall be subject to a deduction of 5 per cent. payable to the General Fund of the University.

CHAPTER II.—TRAVELLING ALLOWANCE.

- 0. 290.** To a Fellow residing outside Bombay but within the limits of the Presidency, who attends a meeting or meetings called by the Registrar for the transaction of business connected with the University, will be paid actual First Class Fare to be paid by him for travelling from his registered address to Bombay and back *by the cheapest route*; in addition to this he will receive a halting allowance of Rs. 7-8 for each day of attending one or more such meetings, except that he shall receive Rs. 15 for the first day of attending such meeting or meetings if his registered address is at a distance exceeding 400 miles from Bombay.
- 0. 291.** Halting allowance may be given for a day on which there is no meeting, provided there is a meeting on the day before and on the day after, and both of which the Fellow attends.
- 0. 292.** Travelling allowance at a rate not exceeding that paid to Fellows may be paid to persons, who are not Fellows of the University, serving on University Committees.
- 0. 293.** When a Fellow resides beyond the limits of the Bombay Presidency, his journey will be counted as commencing from or ending at the first station at which he enters or leaves the Bombay Presidency.

CHAPTER III—FELLOWS.

List of Fellows on the 5th of November 1930.

[*Note.—The date within brackets is the date on which the person ceases to be a Fellow unless re-elected or re-nominated.*]

Order of Seniority.	Name.	Belongs to the Faculty of
Ex-Officio.		
1	The Rt. Hon'ble Sir Frederick Sykes, P.C., G.C.I.E., G.B.E., K.C.B., C.M.G., <i>Chancellor</i>	...
2	The Hon'ble Mr. Justice Mirza Ali Akbar Khan, B.A., Bar-at-Law, <i>Vice-Chancellor</i>	A & L

A stands for Arts.

L stands for Law.

Order of Seniority	Name.	Belongs to the Faculty of
Ex-Officio—concl'd.		
3	Khan Bahadur Fardunji M. Dastur, I.S.O., M.A., <i>Offg. Registrar</i>	A & S
4	The Hon'ble Mr. J. W. F. Beaumont, K.C., Bar- at-Law, <i>Chief Justice</i>	L
5	The Hon'ble Moulvi Rafiuddin Ahmad, Bar-at-Law, <i>Minister of Education</i>	L
6	R. H. Beckett, Esq., C.I.E., B.Sc., I.E.S., <i>Director of Public Instruction</i>	A & S
7	Major General W. H. C. Forster, M.B., C.M., I.M.S., <i>Surgeon-General</i>	M
8	T. F. Main, Esqr., O.B.E., B.Sc., <i>Director of Agriculture</i>	S
9	C. M. Lane, Esq., I.S.E., <i>Secretary, P. W. D.</i> ...	S
10	C. N. Vakil, Esq., M.A., M.Sc., <i>Head of the University Deptt. of Economics</i>	A
11	Dr. G. S. Ghurye, M.A., Ph.D., <i>Head of the University Deptt. of Sociology</i>	A
Ordinary.		
<i>Elected by Principals of Colleges (13).</i>		
26	Principal S. G. Burrow, B.Sc., A.R.C.Sc. (4-8-1935)	A & S
29	Principal H. G. Rawlinson, M.A., F.R.Hist.S., I.E.S. (4-8-1931)	A
33	Dr. A. N. Meldrum, D.Sc., I.E.S. (4-8-1933)	S
36	Principal C. Graham Smith, O.B.E., A.C.G.I., A.M.I.C.E., I.E.S. (4-8-1932)	S
41	The Rev. John McKenzie, M.A. (4-8-1932)	A
42	Dr. W. Burns, D.Sc., I.A.S. (4-8-1931)	S

A stands for Arts.
S „ Science.

L stands for Law.
M „ Medicine.

Order of Seniority.	Name.	Belongs to the Faculty of
<i>Elected by Principals of Colleges—concl'd.</i>		
56	Principal H. Hamill, B.A., I.E.S. (4-8-1935)	A
57	Principal H. V. Hampton, M.A., I.E.S. (4-8-1934)	A
66	Principal T. K. Shahani, M.A. (4-8-1935)	A
68	Dr. Jivraj N. Mehta, M.D., M.R.C.P. (4-8-1931)	M
70	Principal T. A. Kulkarni, B.A. (4-11-1935)	A
76	Principal S. B. Butani, M.A., B.Sc. (4-8-1932)	A & S
85	Principal V. G. Dalvi, B.A., LL.B., Bar-at-Law (4-8-1934)	L
<i>Elected by University Teachers and Teachers (20).</i>		
23	Professor P. A. Wadia, M.A. (4-8-1932)	A
34	Dr. Y. G. Nadgir, M.S., F.C.P.S. (4-8-1934)	M
37	Professor G. B. Kolhatkar, M.A., A.I.I.Sc. (4-8-1933)	S
44	Professor A. K. Trivedi, M.A., LL.B. (4-8-1931)	A
53	Dr. K. K. Joshi, M.A., Ph. D. (4-8-1933)	A
58	Dr. Bal Krishna, M.A., Ph.D., F.S.S., F.R.E.S. (4-8-1934)	A
64	Rao Bahadur P. C. Patil, L.Ag., M.Sc., I.A.S., (4-8-1931)	S
71	Professor G. R. Paranjpe, M.Sc., A.I.I.Sc., I.E.S. (4-8-1934)	S
73	Professor D. R. Gadgil, M.A., M.Litt. (4-8-1932)	A
86	Dr. A. S. Erulkar, M.D., M.R.C.S., L.R.C.P., F.C.P.S. (4-8-1931)	M
87	Professor Motiram Idanmal, B.A., LL.B. (4-8-1933)	L

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S „ Science.

L stands for Law.
M „ Medicine.

Order of Seniority.	Name.	Belongs to the Faculty of
<i>Elected by University Teachers and Teachers —concl'd.</i>		
88	Professor A. B. Gajendragadkar, M.A. (4-8-1935)	A
89	Professor M. S. Commissariat, M.A., I.E.S. (4-8-1931)	A
90	Professor R. D. Karmarkar, M.A. (4-8-1935)	A
91	Professor C. D. Pinto, M.A., LL.B. (4-8-1932)	A
92	Professor N. S. Takakhav, M.A., I.E.S. (4-8-1934)	A
93	Dr. Purshottam M. Desai, M.B., B.S., M.R.C.S., D.M.R.E. (4-8-1932)	M
138	Dr. N. A. Purandare, M.D. (4-8-1935)	M
139	Professor T. M. Adwani, M.A., LL.B. (4-8-1935)	A
144	Prof. K. R. Gunjekar, M.A., B.Sc. (17-11-1935)	
<i>Elected by Head Masters of Schools (5).</i>		
46	Kaikobad B. Marzban, Esq., B.A. (4-8-1934)	A
94	Bhikhabhai K. Patel, Esq., B.A. (4-8-1931)	A
95	S. R. Kanitkar, Esq., M.A., S.T.C.D. (4-8-1932)	A
96	K. G. Warty, Esq., M.A., B.T. (4-8-1933)	A
97	L. G. Bhojwani, Esq., B.A. (4-8-1935)	A
<i>Elected by the Bombay Municipal Corporation (1).</i>		
121	Dr. G. V. Deshmukh, M.D., F.R.C.S. (4-8-1935)	M
<i>Elected by the Indian Merchants' Chamber, Bombay (1).</i>		
110	Nagindas T. Master, Esq., B.A., LL.B. (4-8-1935)	L
<i>Elected by the Chamber of Commerce, Bombay. (1)</i>		
81	G. L. Winterbotham, Esq., B.A., (Cantab.), (4-8-1934)	A

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L stands for Law.

M „ Medicine.

Order of Seniority.	Name.	Belongs to the Faculty of
	<i>Elected by the Millowners' Association, Bombay.(1)</i>	
80	Jehangir B. Petit, Esq. (4-8-1932)	A
	<i>Elected by the Millowners' Association, Ahmedabad. (1)</i>	
79	Shantilal Mangaldas, Esq., B.A. (4-8-1933)	A
	<i>Elected by City Municipalities. (5)</i>	
98	Balvantray P. Thakor, Esq., B.A., S.T.C. (4-8-1932)	A
99	Professor N. K. Bhagwat, M.A. (4-8-1935)	A
100	Dr. R. K. Naidu, L.M. & S. (4-8-1931)	M
101	Shriniwas V. Kowjalgi, Esq., B.A., LL.B.(4-8-1932)	L
102	Bhojsing G. Pahalajani, Esq., B.A., B.Sc. (4-8-1934)	L
	<i>Elected by District Local Boards. (5)</i>	
103	Apabhai G. Desai, Esq., Bar-at-Law • • (4-8-1934)	L
104	Sakharam S. Naik, Esq., B.A., L.C.E., B.Sc., M.I.E. (Ind.) (4-8-1931)	S
105	Sitaram R. Tawde, Esq., B.A., M.A. (Educ.), T.Ed., B.E.S. (4-8-1933)	A
106	S. S. Basawanal, Esq., M.A. (4-8-1933)	A
107	Moulabuksh M. Soomro, Esq. (4-8-1931)	A
	<i>Elected by Registered Graduates. (25)</i>	
24	Dr. R. N. Ranina, L.M. & S., F.C.P.S. (4-8-1933)	M
27	Bhaskarrao V. Mehta, Esq., M.A., LL.B. (4-8-1934)	L
38	Dattaram G. Dalvi, Esq., M.A., LL.B. (4-8-1931)	L
39	S. C. Shahani, Esq., M.A. (4-8-1933)	A

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M „ Medicine.

Order of Seniority.	Name.	Belongs to the Faculty of
<i>Elected by Registered Graduates—contd.</i>		
40	Professor Vishwanath B. Naik, M.A. (4-8-1934)	A
45	Dr. Mangaldas V. Mehta, O.B.E., B.A., L.M. & S., L.M., F.R.C.P., F.C.P.S. (4-8-1934)	M
48	Dr. Purshotamdas T. Patel, M.D., M.R.C.P., D.T.M. & H., F.C.P.S. (4-8-1935)	M
49	S. G. Sathe, Esq., M.A. (4-8-1935)	A
60	Dr. Kuvarji G. Naik, M.A., D.Sc., F.I.C. (4-8-1932)	S
61	Prof. Mohanlal P. Dave, M.A., LL.B. (4-8-1931)	A
62	Khushal T. Shah, Esq., B.A., B.Sc., Bar-at-Law. (22-9-1935)	A
69	Kanaialal M. Munshi, Esq., B.A., LL.B. (4-8-1933)	A & L
108	Dr. Pranjivan M. Mehta, M.D., M.S., F.C.P.S. (4-8-1932)	M
109	Jamshedji P. Mistri, Esq., B.A., L.C.E. (4-8-1932)	S
111	Dr. Shankarlal K. Vaidya, M.R.C.S., D.T.M. & H., D.P.H. (4-8-1931)	M
112	Rango A. Jahagirdar, Esq., M.A., LL.B. (4-8-1931)	L
113	Mrs. Sharada Mehta, B.A. (4-8-1932)	A
114	Padmanabh A. Dhond, Esq., M.A. (4-8-1934)	A
115	Dr. Noshirwan A. Thoothi, B.A., D.Phil. (Oxon.) (4-8-1932)	A
116	Makanji J. Mehta, Esq., B.A., LL.B., Bar-at-Law. (4-8-1933)	L
117	Pestonji B. Doctor, Esq., B.A., B.Sc., L.C.E. (4-8-1935)	S

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Order of Seniority.	Name.	Belongs to the Faculty of
<i>Elected by Registered Graduates—concl'd.</i>		
118	Professor V. K. Joag, M.A. (4-8-1933)	A
119	Professor N. G. Damle, M.A. (4-8-1935)	A
120	M. R. Paranjpe, Esq., M.A., B.Sc. (4-8-1934)	A
140	Miss G. J. Bahadurji, M.A. (4-8-1935)	A
<i>Elected by the Faculty of Arts. (3)</i>		
54	Principal N. M. Shah, M.A., F.C.Ph.S., F.R.A.S. (4-8-1935)	A & S
130	Syed Abdulla Brelvi, M.A., LL.B. (4-8-1933)	A
131	Prof. A. X. Soares, M.A., LL.B. (4-8-1932)	A
<i>Elected by the Faculty of Science (3).</i>		
31	Principal K. R. Kanitkar, M.A., B.Sc. (4-8-1934)	A & S
132	Prof. D. D. Kanga, M.A., A.I.C., A.I.I.Sc., I.E.S. (4-8-1934)	S
133	Dr. G. S. Mahajani, B. A. (Cantab.). (4-8-1931)	A & S
<i>Elected by the Faculty of Law (2)</i>		
30	Dr. T. M. Kajiji, M.A., LL.D., Bar-at-Law. (4-8-1931)	L
134	G. M. Gupte, Esq., B.A., LL.B. (4-8-1932)	L
<i>Elected by the Faculty of Medicine. (2)</i>		
15	Dr. A. G. Viegas, L.M. & S., F.C.P.S. (4-8-1933)	M
135	Dr. Gulamhussein V. Patel, L.M. & S. (4-8-1935)	M
<i>Elected by the Bombay Legislative Council (5)</i>		
82	Khan Bahadur Muhammad Ayub Shah Muhammad Khuhro,* ...	A
A stands for Arts. S „ Science. L stands for Law. M „ Medicine.		

*Will continue to be a Fellow until the next election under Section 13 (7) II, A (vii) of the Act.

Order of Seniority.	Name.	Belongs to the Faculty of
	<i>Elected by the Bombay Legislative Council—concl'd.</i>	
83	Namdeorao E. Navle, Esq., B.A., LL.B.*	L
84	Rao Bahadur Raoji R. Kale, B.A., LL.B.	L
129	R. G. Pradhan, Esq., B.A., LL.B.*	L
141	Khan Bahadur Hormusji P. Chahewala, B.A., LL.B.*	L
	<i>Nominated by His Excellency the Chancellor (40).</i>	
12	Sir Temulji B. Nariman, Kt., L.M., M.R.C.P.E., F.C.P.S. (4-8-1933)	M
13	Shams-ul-Ulama Dr. Sir Jivanji J. Modi, Kt., C.I.E., B.A., Ph.D. (4-8-1932)	A
14	Dr. D. A. D'Monte, M.D., M.R.A.S., F.C.P.S. (4-8-1933)	M
16	Dr. N. A. F. Moos, D.Sc., L.C.E., F.R.S.E. (4-8-1935)	A & S
17	Sir Chimanlal H. Setalvad, K.C.I.E., B.A., LL.D. (4-8-1931)	L
18	Dr. R. Row, O.B.E., M.D., D.Sc., F.C.P.S. (4-8-1931)	S & M
19	Sir Ibrahim Rahimtoola, K.C.S.I., C.I.E. (4-8-1933)	A
20	K. Natarajan, Esq., B.A. (4-8-1932)	A
21	Abdeali M. Kajiji, Esq., B.A., LL.B., Bar-at-Law. (4-8-1932)	L
22	Professor Shaikh Abdulkadir Surfraz, M.A., I.E.S. (4-8-1932)	A
25	Sir Lalubhai Samaldas, Kt., C.I.E. (4-8-1933)	A
28	Dr. A. R. Normand, M.A., B.Sc., Ph.D. (4-8-1934)	S

A stands for Arts.

L stands for Law.

S „ Science.

M „ Medicine.

*Will continue to be a Fellow until the next election under Section 13 (7) II, A (vii) of the Act.

Order of Seniority.	Name.	Belongs to the Faculty of
<i>Nominated by the Chancellor—contd.</i>		
32	Dr. H. M. Masina, F.R.C.S., F.C.P.S. (4-8-1932)	M
35	Lt.-Col. J. N. Duggan, O.B.E., A.I.R.O., D.O., F.C.P.S. (4-8-1931)	M
43	Principal M. L. Tannan, M. Com., Bar-at-Law, I.E.S. (4-8-1931)	A
47	B. J. Wadia, Esq., M.A., LL.B., Bar-at-Law. (4-8-1934)	L
50	Principal Syed Nawab Ali, M.A. (4-8-1933)	A
51	A. J. Turner, Esq., B. Sc., F.I.C. (4-8-1934)	S
52	Dr. Edward Parker M.A., Ph.D. (4-8-1934)	A
55	Miss Nawajbai D. Contractor, B.A. (4-8-1935)	A
59	Professr A. C. Farran, B.A., I.E.S. (4-8-1931)	A
63	The Rev. J. Dühr, S.J., D.D., Ph.D. (4-8-1932)	A
65	Principal G. N. Gokhale, B.Sc., L.C.E., M.I.E.(Ind.) (4-8-1935)	S
67	Dr. S. K. Belvalkar, M.A., Ph.D., I.E.S. (4-8-1935)	A
72	Principal G. Findlay Shirras, M.A., F.S.S., I.E.S. (4-8-1933)	A
74	Ghulamkadir Md. Shahban, Esq., B.A. (4-8-1931)	A
75	Professor H. P. Jordan, M.Sc., I.E.S. (4-8-1935)	S
77	Divan Bahadur Krishnalal M. Jhaveri, M.A., LL.B. (4-8-1934)	A & L
78	Dr. U. M. Daudpota, M.A., Ph.D., M.R.A.S. (4-8-1934)	A
122	Professor M. A. Kazi, M.A. (4-8-1931)	A

A stands for Arts.
S „ Science.

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M „ Medicine.

Order of Seniority.	Name.	Belongs to the Faculty of
<i>Nominated by the Chancellor—concl'd.</i>		
123	Syed Miran Md. Shah, B.A., LL.B. (4-8-1932)	L
124	Moulvi Md. Yunnus G. Haindaday, B.A., LL.B. (4-8-1933)	L
125	R. P. Masani, Esq., M.A. (4-8-1932)	A
126	Mohammed Hidayatulla, Esq., B.A. (4-8-1933)	A
127	A. O. Koreishi, Esq., M.A. (4-8-1934)	A
128	N. V. Mandlik, Esq., B.A., LL.B. (4-8-1931)	L
136	Dr. B. R. Ambedkar, M.A., Ph.D., D.Sc., Bar-at-Law. (17-5-1935)	A & L
137	Major S. S. Sokhey, M.A., B.Sc., M.D., I.M.S. (11-6-1935)	M
142	Dr. Mahamed B. Rehman, M.A., Ph.D. (4-8-1935)	A
143	Rao Bahadur S. N. Angadi, B.A., LL.B. (4-8-1935)	L

A stands for Arts.
L „ Law.

M stands for Medicine.

CHAPTER IV—MEMBERS CO-OPTED BY THE FACULTIES.

Members co-opted by the Faculty of Arts.

The Rev. C. Ghezzi, S.J., B.A., Ph.D.

Professor E. Moses Ezekiel, B.A., LL.B.

Professor K. V. Abhyankar, M.A.

Shams-ul-ulama Dastur Dr. Darab Peshotan Sanjana, B.A.,
Ph.D.

K. G. Kundangar, Esq., M.A.

V. B. Joshi, Esq., B.A.

Professor H. C. Iyengar, B.A., P.O.L.

Professor K. R. Gunjekar, M.A., B.Sc., I.E.S.

The Rev. H. Rafael, S.J., D.Sc., Ph.D., D.D.

Professor V. G. Rao, B.A., LL.B., Bar-at-Law.

The Rev. J. Caius, S.J.

Dr. V. S. Sukthankar, Ph.D.
 J. M. Adwani. Esq. M.A.
 Professor D. P. Patravali, M.A.
 B. N. Dabhar, Esq., M.A.

Members co-opted by the Faculty of Science.

The Rev. E. Blatter, S.J., Ph.D., F.L.S.
 Professor J. J. Asana, M.A.
 Professor P. R. Awati, B.A., D.I.C., I.E.S.
 Professor M. B. Pithawala, B.A., B.Sc., F.G.S., M.R.A.S.
 Rao Bahadur Professor D. L. Sahasrabudhe, M.Sc., M.Ag.
 Professor V. G. Gokhale, L.Ag.
 B. S. Patel, Esq., B.Ag., N.D.A., N.D.D.
 Professor T. G. Yeolekar, M.A., B.Sc.
 Dr. S. B. Hudlikar, M.A., Ph.D.
 Professor G. G. Narke, M.A., M.Sc.
 Professor V. B. Divatia, M.A., I.E.S.
 Professor R. H. Dastur, M.Sc., F.L.S.
 Professor D. L. Dixit, B.A.
 Professor S. V. Shevade, B.Sc., D.Ag., F.Z.S., F.R.H.S.

None co-opted by the Faculty of Law.

Members co-opted by the Faculty of Medicine.

Major Sorab K. Engineer, O.B.E., F.R.C.P.E., F.C.P.S.
 Dr. A. S. Paranjpe, M.D.Ch.B., L.R.C.P. & S., D.T.M.
 Khan Bahadur A. K. Turner, L.M. & S., F.C.P.S.
 Dr. J. S. Nerurkar, B.Sc., L.M. & S., D.P.H.

CHAPTER V.—THE SYNDICATE.

The Hon'ble Mr. Justice Mirza Ali Akbar Khan, B.A., Bar-at-Law.
Vice-Chancellor (Ex-Officio)
 R. H. Beckett, Esq., C.I.E., I.E.S.,
Director of Public Instruction (Ex-Officio)
 *Professor P. A. Wadia, M.A. (18-1-1933).
 †Dr. N. A. F. Moos., D.Sc., L.C.E., F.R.S.E. (18-1-1933).
 *Abdeali M. Kajiji, Esq., B.A., LL.B., Bar-at-Law (18-1-1933)
 †Dr. R. N. Ranina, L.M. & S., F.C.P.S. (18-1-1933).
 *Dr. A. N. Meldrum, D.Sc., I.E.S., (18-1-1932).
 †D. G. Dalvi, Esq., M.A., LL.B. (18-1-1931).
 *Principal M. L. Tannan, M. Com., Bar-at-Law, I. E. S.,
 (18-1-1932).

*Elected by the Academic Council.

† „ „ Senate.

The dates within brackets suffixed to the names are the dates upto which the respective persons continue to be members unless they vacate their Office under Section 15 (3) of the Act.

The Syndicate—concl'd.

*Dr. Mangaldas V. Mehta, O.B.E., B.A., L.M. & S., L.M., F.R.C.P., F.C.P.S. (21-7-1933).

†B. J. Wadia, Esq. M.A., LL.B., Bar-at-Law (18-1-1931).

*Principal H. Hamill, B.A., I.E.S. (18-1-1931).

*The Rev. J. Dühr, S.J., Ph.D., D.D. (18-1-1932).

†Apabhai G. Desai, Esq., Bar-at-Law (14-6-1933).

†Dr. S. K. Vaidya, M.R.C.S., D.P.H., D.T.M. & H., (18-1-1932).

†Mrs. Sharada Mehta, B.A. (18-1-1932).

†M. R. Paranjpe, Esq. (18-1-1933).

†*Vacant.*

CHAPTER VI—THE ACADEMIC COUNCIL.

(i) **Vice-Chancellor.**

(1) The Hon'ble Mr. Justice Mirza Ali Akbar Khan, *Chairman.*

(ii) **Deans of Faculties.**

(2) Professor P. A. Wadia.

(3) Dr. A. N. Meldrum.

(4) Abdeali M. Kajiji, Esq.

(5) Dr. A. S. Erulkar.

} Ex-Officio

(iii) **Representatives of University Professors and wholetime University Teachers.**

(6) Professor C. N. Vakil.

(7) Dr. N. A. Thoothi.

(iv) **Twenty representatives of Boards of Studies.**

(8) Principal H. G. Rawlinson, I. E. S. (7-12-1930)

(9) The Rev. J. Dühr, S. J. (7-12-1932)

(10) Professor Shaikh Abdulkadir Surfraz, I. E. S. (7-12-1932)

(11) Professor R. D. Karmarkar (28-8-1933)

(12) Professor A. K. Trivedi (7-12-1931)

(13) Dr. G. S. Ghurye (7-12-1931)

(14) The Rev. John McKenzie (7-12-1932)

(15) P. A. Dhond, Esq. (28-8-1933)

(16) Principal M. L. Tannan, I. E. S. (7-12-1930)

(17) Principal N. M. Shah (7-12-1932)

(18) Principal S. G. Burrow (7-12-1932)

*Elected by the Academic Council.

† „ „ Senate.

The dates within brackets suffixed to the names are the dates upto which the respective persons continue to be members unless they vacate their office under Section 15 (3) of the Act.

(iv) Twenty representatives of Boards of Studies—*concl.*

- (19) Dr. A. R. Normand (28-8-1933)
- (20) Professor P. R. Awati, I. E. S. (7-12-1932)
- (21) Principal C. Graham Smith, O. B. E., I. E. S. (7-12-1931)
- (22) Dr. W. Burns, I. A. S. (7-12-1931)
- (23) Principal V. G. Dalvi (7-12-1930)
- (24) K. M. Munshi, Esq. (7-12-1932)
- (25) Dr. G. V. Deshmukh (7-12-1931)
- (26) Dr. Y. G. Nadgir (7-12-1930)
- (27) Dr. Mangaldas V. Mehta, O. B. E. (7-12-1930)

(v) Two Head Masters elected by the Senate.

- (28) K. B. Marzban, Esq. (7-12-1932)
- (29) Bhikhabhai K. Patel, Esq. (7-12-1932)

(vi) Five other Fellows elected by the Senate.

- (30) Principal H. Hamill, I. E. S. (7-12-1932)
- (31) Dr. K. G. Naik (7-12-1931)
- (32) Professor K. R. Kanitkar (7-12-1932)
- (33) Principal S. B. Butani (23-8-1933)
- (34) Dr. Jivraj N. Mehta (7-12-1931)

CHAPTER VII—THE BOARD OF POST-GRADUATE STUDIES.

The Vice-Chancellor.

†Professor P. A. Wadia (6-2-1932).

*K. M. Munshi, Esq. (6-2-1931).

†Professor C. N. Vakil (6-2-1933).

*Dr. W. Burns (6-2-1932).

†Dr. Mangaldas V. Mehta, O.B.E. (6-2-1931).

†Dr. K. G. Naik (6-2-1933).

*Dr. Jivraj N. Mehta (6-2-1933).

*Dr. G. S. Mahajani (6-2-1932).

CHAPTER VIII.—THE BOARDS OF STUDIES IN ALL THE FACULTIES.

(All the Boards were constituted on 10-10-1929)

I.—FACULTY OF ARTS.**(1) *English Literature.***

- 1. Dr. Edward Parker, *Chairman.*
- 2. Principal H. G. Rawlinson, I. E. S.
- 3. S. C. Shahani, Esq.

The dates within brackets suffixed to the names are the dates upto which the respective persons continue to be members unless they vacate their office under Section 15 (3) of the Act.

*Elected by the Syndicate.

†Elected by the Academic Council.

English Literature—concl'd.

4. K. B. Marzban, Esq.
5. Principal H. Hamill, I.E.S.
6. Professor C. D. Pinto.
7. Professor N. S. Takakhav, I. E. S.
8. Professor A. X. Soares.

(2) Latin, Greek and Hebrew.

1. The Rev. J. Dühr, S.J., *Chairman.*
2. Principal H. G. Rawlinson, I.E.S.
3. Principal H. Hamill, I.E.S.
4. Professor C. D. Pinto.
5. Professor N. S. Takakhav, I.E.S.
6. Professor A. X. Soares.
7. Professor E. Moses Ezekiel.
8. The Rev. C. Ghezzi, S.J.

(3) Persian, Arabic and Urdu.

1. Professor Shaikh Abdulkadir Surfraz, I.E.S., *Chairman.*
2. Principal Syed Nawab Ali.
3. Dr. U. M. Daudpota.
4. Professor M. A. Kazi.
5. Muhammad Hidayatullah, Esq.
6. Abdullamia O. Koreishi, Esq.
7. Syed Abdullah Brelvi, Esq.
8. *Vacant.*

(4) Modern European Languages.

1. The Rev. J. Dühr, S.J., *Chairman.*
2. Dr. Edward Parker.
3. Dr. K. K. Joshi.
4. Miss Nawajbai D. Contractor.
5. Professor C. D. Pinto.
6. Professor A. X. Soares.
7. Professor V. G. Rao.
8. The Rev. F. Caius, S.J.

(5) Sanskrit, Pali and Ardha-Magadhi.

1. Professor A. B. Gajendragadkar, *Chairman.*
2. Dr. G. S. Ghurye.
3. Professor Mohanlal P. Dave.
4. Dr. S. K. Belvalkar, I.E.S.
5. Professor R. D. Karmarkar.
6. Professor N. K. Bhagvat.
7. Professor K. V. Abhyankar.
8. Dr. V. S. Sukthankar.

(6) *Avesta and Pahlavi.*

1. Shams-ul-Ulama Dr. Sir Jivanji J. Modi, Kt., C.I.E.,
Chairman.
2. Shams-ul-Ulama Dastur Dr. Darab Peshotan Sanjana.
3. B. N. Dhabhar, Esq.

(7) *Marathi.*

1. Professor N. K. Bhagvat, *Chairman.*
2. Dr. K. K. Joshi.
3. Professor R. D. Karmarkar.
4. M. R. Paranjpe, Esq.
5. Professor K. V. Abhyankar.

(8) *Gujarati.*

1. Divan Bahadur K. M. Jhaveri, *Chairman.*
2. Professor A. K. Trivedi.
3. K. M. Munshi, Esq.,
4. Mrs. Sharada Mehta.
5. Dr. N. A. Thoothi.

(9) *Kannada.*

1. V. B. Joshi, Esq., *Chairman.*
2. K. G. Warty, Esq.
3. Professor H. C. Iyengar.
4. Professor K. G. Kundangar.
5. S. S. Basawanal, Esq.

(10) *Sindhi.*

1. S. C. Shahani, Esq., *Chairman.*
2. Principal S. B. Butani.
3. J. M. Adwani Esq.

(11) *History and Economics.*

1. Professor P. A. Wadia, *Chairman.*
2. Dr. G. S. Ghurye.
3. Professor A. C. Farran, I.E.S.
4. Professor D. R. Gadgil.
5. Principal G. Findlay Shirras, I.E.S.
6. Professor M. S. Commissariat, I.E.S.
7. Professor C. N. Vakil.
8. *Vacant.*

(12) *Logic and Philosophy.*

1. Professor P. A. Wadia, *Chairman.*
2. Professor A. K. Trivedi.
3. The Rev. John McKenzie.

(12) *Logic and Philosophy—concl'd.*

4. Principal H. V. Hampton, I.E.S.
5. Dr. S. K. Belvalkar, I.E.S.
6. Dr. N. A. Thoothi.
7. Professor V. K. Joag.
8. Professor N. G. Damle.

(13) *Teaching.*

1. K. B. Marzban, Esq., *Chairman.*
2. Bhikhabhai K. Patel, Esq.
3. Lilaram G. Bhojwani, Esq.
4. S. R. Tawde, Esq.
5. M. R. Paranjpe, Esq.
6. P. A. Dhond, Esq.
7. Principal H. V. Hampton, I.E.S.

(14) *Commerce.*

1. Principal M. L. Tannan, I.E.S., *Chairman.*
2. Professor P. A. Wadia.
3. Sir Lalubhai Samaldas, Kt., C.I.E.
4. Principal G. Findlay Shirras, I.E.S.
5. Professor C. N. Vakil.

I (A).—**FACULTIES OF ARTS AND SCIENCE.***Mathematics.*

1. Professor V. B. Naik, *Chairman.*
2. Principal N. M. Shah.
3. Dr. G. S. Mahajani.
4. Professor K. R. Gunjekar, I.E.S.
5. The Rev. H. Rafael, S.J.
6. Professor G. R. Paranjpe.
7. Professor D. P. Patravali.
8. *Vacant.*

II.—**FACULTY OF SCIENCE.**(1) *Physics.*

1. Professor K. R. Kanitkar, *Chairman.*
2. Principal S. G. Burrow.
3. Professor G. R. Paranjpe, I.E.S.
4. Principal S. B. Butani.
5. Professor V. B. Divatia, I.E.S.

(2) *Chemistry.*

1. Dr. A. R. Normand, *Chairman.*
2. Dr. A. N. Meldrum, I.E.S.
3. Professor G. B. Kolhatkar.
4. Dr. K. G. Naik.
5. Professor D. D. Kanga, I.E.S.

(3) *Botany.*

1. The Rev. E. Blatter, S.J., *Chairman.*
2. Dr. W. Burns.
3. Professor R. H. Dastur.
4. Professor D. L. Dixit.
5. Professor S. V. Shevade.

(4) *Zoology.*

1. Professor P. R. Awati, I.E.S., *Chairman.*
2. Dr. R. Row, O.B.E.
3. The Rev. E. Blatter, S.J.
4. Professor J. J. Asana.
5. Professor T. G. Yeolekar.

(5) *Geology.*

1. Professor G. G. Narke, I.E.S.
2. Dr. N. A. F. Moos.
3. Rao Bahadur D. L. Sahasrabuddhe.
4. Dr. S. B. Hudlikar.
5. Professor M. B. Pithawalla.

(6) *Engineering.*

1. D. R. H. Browne, Esq. *Chairman.*
2. Dr. N. A. F. Moos.
3. Principal C. Graham Smith, O.B.E., I.E.S.
4. Principal G. N. Gokhale.
5. Professor H. P. Jordan, I.E.S.
6. Sakharam S. Naik, Esq.
7. Jamshedji P. Mistri, Esq.
8. Pestonji B. Doctor, Esq.

- (7) *Agriculture including Veterinary Science.*

1. T. F. Main, Esq., *Chairman.*
2. Dr. W. Burns.
3. Rao Bahadur P. C. Patil.
4. Rao Bahadur D. L. Sahasrabuddhe.
5. Professor V. G. Gokhale.
6. B. S. Patel, Esq.

III.—FACULTY OF LAW.

Law.

1. Abdeali M. Kajiji, Esq., *Chairman.*
2. The Hon'ble Mr. Justice B. J. Wadia.
3. K. M. Munshi, Esq.
4. Principal V. G. Dalvi.
5. Rao Bahadur R. R. Kale.

6. Makanji J. Mehta, Esq.
7. Motiram Idanmal, Esq.

IV.—FACULTY OF MEDICINE.

(1) *Anatomy, Physiology and Materia Medica.*

1. Professor Y. G. Nadgir.
2. Dr. Pranjivan M. Mehta.
3. Major Sorab K. Engineer, O.B.E.
4. Dr. A. S. Paranjpe.
5. *Vacant.*
6. *Vacant.*

(2) *Medicine, Surgery, Midwifery, etc.*

1. Dr. Shankarlal K. Vaidya, *Chairman.*
2. Dr. Jivraj N. Mehta.
3. Dr. R. Row, O.B.E.
4. Lt.-Col. J. N. Duggan, A.I.R.O.
5. Dr. Mangaldas V. Mehta, O.B.E.
6. Dr. A. S. Erulkar.
7. Dr. G. V. Deshmukh.
8. Khan Bahadur A. K. Turner.
9. Dr. J. S. Nerurkar.
10. *Vacant.*

CHAPTER IX.—OTHER COMMITTEES.

Library Committee.

(To be in Office upto 31-1-1933).

1. Professor P. A. Wadia.
2. Dr. N. A. F. Moos.
3. Principal H. Hamill, I.E.S.
4. K. M. Munshi, Esq.
5. Shams-ul-Ulama Dr. Sir Jivanji J. Modi, Kt., C.I.E.
6. Professor Shaikh Abdulkadir Surfraz, I.E.S.
7. Professor K. R. Kanitkar.
8. Principal N. M. Shah.
9. Dr. Edward Parker.
10. Divan Bahadur K. M. Jhaveri.
11. Professor K. R. Gunjekar, I.E.S.
12. *Vacant.*

Garden Committee.

(To be in Office upto 31-1-1933).

1. The Executive Engineer, Presidency Division.
2. Dr. N. A. F. Moos.
3. Professor R. H. Dastur.
4. The Superintendent, Municipal Gardens, Byculla.

Grants Utilitization Committee.*(To be in Office upto 31-1-1933).*

- 1 The Vice-Chancellor, *Chairman*.
 - 2 Dr. N. A. F. Moos.
 - 3 A. M. Kajiji, Esq.
 - 4 Dr. A. N. Meldrum, I.E.S.
 - 5 K. M. Munshi, Esq.
 - 6 Principal H. G. Rawlinson, I.E.S.
-

Building Committee.*(To be in Office upto 31-1-1933).*

- 1 The Vice-Chancellor.
 - 2 The Executive Engineer, Presidency Division.
 - 3 Dr. N. A. F. Moos.
 - 4 F. O. J. Roose, Esq., Electrical Engineer to Government, P. W. D.
-

Standing Committee on College Inspection Reports.*(To be in office upto 31-1-1933.)*

- 1 Dr. N. A. F. Moos.
 - 2 Major S. L. Bhatia, M. C., I.M.S.
 - 3 A. M. Kajiji, Esq.
 - 4 Dr. R. N. Ranina.
 - 5 Principal H. Hamill, I. E. S.
-

University Foreign Information Bureau.*(To be in office till 31-1-1933.)*

- 1 Dr. A. N. Meldrum, I. E. S.
 - 2 Principal M. L. Tannan, I. E. S.
 - 3 The Hon'ble Mr. Justice B. J. Wadia.
 - 4 Principal H. Hamill, I. E. S.
 - 5 The Rev. J. Dühr, S. J.
 - 6 Principal John McKenzie.
 - 7 Principal N. M. Shah.
 - 8 K. S. Vakil, Esq. I. E. S.
 - 9 Professor H. P. Jordan, I. E. S.
 - 10 Dr. G. W. Burley.
 - 11 Miss Amy B. H. J. Rustomjee.
 - 12 *Vacant*.
-

University Publication Board.*(To be in office upto 28-2-1933.)*

The Vice-Chancellor.
 Professor P. A. Wadia.
 Dr. A. N. Meldrum, I.E.S.
 Abdeali M. Kajiji, Esq.
 Dr. A. S. Erulkar.
 K. M. Munshi, Esq.
 Dr. G. S. Mahajani.
 Professor P. R. Awati, I.E.S.
 The Rev. H. Heras, S.J.

The University Sports Board.

Principal, Elphinstone College (Including Royal	} <i>Ex-Officio.</i>
Institute of Science.)	
„ Law College.	
Dean, Grant Medical College.	
Principal, Wilson College.	
„ St. Xavier's College.	
„ Sydenham College.	
„ Secondary Training College.	} <i>Appointed by the</i>
Dean, Seth G. S. Medical College.		Syndicate
K. M. Munshi, Esq.	} <i>Appointed by the</i>
Dr. S. B. Setna.	

Standing Committee on Equivalence of Examinations.

1. The Dean of the faculty of Arts.
2. „ „ „ Science.
3. „ „ „ Law.
4. „ „ „ Medicine.

CHAPTER X.—HONORARY FELLOWS.

- 1 Divan Bahadur Kashinath R. Godbole, C.B.E., B.A., M.C.E.
- 2 Dr. Hormasji Jehangir Bhabha, C.I.E., M.A., D.Litt. (Hony.)
- 3 Sir Cowasjee Jehangir, Bart.
- 4 Khan Bahadur Fardunji M. Dastur, M.A., I.S.O.
- 5 Kavasji Dadabhai Naegamvala, M.A.
- 6 Lieut.-Colonel D. N. Parakh, L.R.C.P., M.R.C.S., I.M.S.
(Retd.)
- 7 Kavasji Jamshedji Sanjana, M.A.
- 8 His Highness Sir Bhagvatsingji Sagramji, G.C.I.E., LL.D.,
Maharaja Saheb of Gondal.

- 9 Navaroji Dorabji Khandalavala, B.A., LL.B.
- 10 Sir Abbas Ali Baig, K.C.I.E., C.S.I., B.A., LL.D.
- 11 Shams-ul-Ulama Dastur Darab Peshotan Sanjana, B.A., Ph.D.
- 12 Khan Bahadur Dr. Shamsuddin Jivabhai Sulemani, L.M.
- 13 Chintaman Vinayak Vaidya, M.A., LL.B.
- 14 Fardunji Manekji Kanga, B.A., LL.B.
- 15 Shivram Vithal Bhandarkar, B.A., LL.B.
- 16 C. M. Cursetji, B.A., Bar-at-Law.
- 17 Mancherji Kavasji Kanga, M.A., B.Sc., L.M. & S.
- 18 Divan Bahadur Ganpat Sadashiv Rao, M.A., LL.B.
- 19 The Right Rev. Mgr. Braz de Monte, D.D., D.C.L.
- 20 Barjorji Jamasji Padshah, Esq.
- 21 Rustam K. R. Cama, B.A., LL.B.
- 22 Jamshedji Merwanji Antia, M.A.
- 23 Ramchandra Hanamant Deshpande, M.A.
- 24 Manekji S. Bharucha, L.C.E.
- 25 Khan Bahadur Navroji Kavasji Kalyanvala, L.M. & S.
- 26 Col. Khan Bahadur Dr. Sir B. H. Nanavatty, Kt., C.I.E., I.T.F.
- 27 Rao Bahadur Damodar Ganesh Padhye, M.A.
- 28 Narayan Gunaji Welinkar, M.A., LL.B.
- 29 Kavasji Edalji Dadachanji, L.M. & S.
- 30 Nawab Sir Hydar Nawaz Jung Bahadur, Kt., B.A.
- 31 Matubhai Kasanbhai Atmaram Bhukanvala, B.A., LL.B.
- 32 Sir Mahadev Bhaskar Chaubal, K.C.I.E., C.S.I., B.A., LL.B.
- 33 K. Subramani Aiyar B.A., L.T., F.S.A.A.

CHAPTER XI.—RECIPIENTS OF THE HONORARY
DEGREE OF LL.D.

1884.

His Excellency the Most Noble the Marquis of Ripon, K.G., G.C.B., G.M.S.I., P.C.

1890.

William Wordsworth, B.A., C.I.E.

1892.

Sir Raymond West, M.A., LL.D., F.R.G.S., K.C.I.E.

1904.

Ramkrishna Gopal Bhandarkar, M.A., Ph.D., Hon. M.R.A.S., C.I.E.

1908.

Francis Guy Selby, M.A., C.I.E.

1915.

*

1916.

28TH JANUARY.

Dadabhai Naoroji.

3RD APRIL.

His Excellency the Right Honourable Lord Hardinge of Pendhurst,
M.A., K.G., P.C., G.C.B., G.C.M.G., G.C.V.O., G.M.S.I., G.M.I.E.,
I.S.O.

1917.

The Rev. Dugald Mackichan, M.A., D.D., LL.D. (Glas.)

1920.

The Right Honourable Lord Sinha of Raipur, P.C., K.C., K.C.S.I.

Sir Chimanlal Harilal Setalvad, K. C. I. E., B.A., LL.B.

Sir Narayan Ganesh Chandavarkar, Kt., B.A., LL.B.

CHAPTER XII.—UNIVERSITY REPRESENTATIVES.

REPRESENTATIVE ON THE BOMBAY LEGISLATIVE COUNCIL.

Rao Bahadur R. R. Kale, B.A., LL.B.

REPRESENTATIVE ON THE BOMBAY MUNICIPAL CORPORATION.

(In office till the 31st March 1932).

D. G. Dalvi, M.A., LL.B.

* Sir Pherozeshah Merwanji Mehta, K. C. I. E., M.A., Barrister-at-Law, died on the 5th November 1915 before a special Convocation could be held for the formal conferring of the Degree on him.

REPRESENTATIVE ON THE
INTER-UNIVERSITY BOARD, INDIA.

P. A. Wadia, M.A.

REPRESENTATIVE OF NORTHERN GROUP (BOMBAY,
PANJAB AND DELHI) OF INDIAN UNIVERSITIES
ON THE COUNCIL OF THE INDIAN INSTITUTE
OF SCIENCE, BANGALORE.

Dr. S. S. Bhatnagar.

REPRESENTATIVE ON THE ADVISORY COMMITTEE
OF THE COLLEGE OF ENGINEERING, POONA.

(Till 31st May 1931.)

N. A. F. Moos, D.Sc., L. C. E., F. R. S. E.

REPRESENTATIVES ON THE ADVISORY COM-
MITTEE OF THE ROYAL INSTITUTE
OF SCIENCE, BOMBAY.

(Till 31st December 1931.)

N. A. F. Moos, D.Sc., L. C. E., F. R. S. E.

A. R. Normand, M. A., B. Sc., Ph. D.

REPRESENTATIVE ON THE ADVISORY COMMITTEE
OF THE GRANT MEDICAL COLLEGE,
BOMBAY.

R. N. Ranina, L. M. & S., F. C. P. S.

REPRESENTATIVE ON THE BOARD OF TRUSTEES
OF THE PRINCE OF WALES MUSEUM OF
WESTERN INDIA.

(Till 31st December 1931)

N. A. F. Moos, D. Sc., L. C. E., F. R. S. E.

REPRESENTATIVE ON THE PROVINCIAL
TEXT-BOOKS COMMITTEE.

(Till 31st December 1930)

S. R. Kanitkar, M.A.

CHAPTER XIII.—A CONSPECTUS OF SCHOLARSHIPS,
PRIZES, MEDALS, LECTURESHIPS
AND FELLOWSHIPS.

MATRICULATION EXAMINATION.

1. The Jugonnath Sunkersett Sanskrit Scholarships—

(Rs. 18 and 12 per mensem.)—Awarded annually to the first two in Sanskrit.—Tenable at an Arts College for two years.—Scholars must prosecute their studies in Sanskrit.

2. The Jam Shri Vibhaji Scholarship—

(Rs. 15 per mensem.)—Biennial.—Awarded every *odd* year to the highest in English amongst natives of Kathiawar, as shown by University records.—Tenable at any College for two years.

3. The Cowasji Jehangir Latin Scholarship—

(Rs. 180 per annum.)—Awarded annually to the first in Latin.—Tenable for a year.—Scholar must continue Latin studies at an Arts College.

4. The David Sassoon Hebrew Scholarship—

(Rs. 250 per annum.)—Biennial.—Awarded every *even* year to the first in Hebrew since the last award.—Tenable for two years.—Scholar must continue Hebrew studies at an Arts College.

5. The Ellis Prize—

(Rs. 50 in books.)—Awarded annually to the first in one of certain specified Oriental Languages.—The Language to be notified a year beforehand.—1931 : Sanskrit.

6. The Hebbert and LaTouche Scholarship—

(Rs. 14 per mensem.)—Biennial.—Awarded every *even* year to the highest amongst natives of Soreth, as shown by University records.—Tenable at any College for two years.

7. The Bai Maneckbai Byramji Jijibhoy Prize—

(Rs. 70 in books.)—Awarded annually to the highest in one of the four prescribed Science heads taken from year to year in the following rotation :—

(i) Elementary Physics and Chemistry, (ii) Elementary Botany and Zoology, (iii) Elementary Physiology and Hygiene, (iv) Domestic Science. (1930 : Elementary Physiology and Hygiene; 1931 : Domestic Science.)

Note.—The value of the Scholarships, Prizes, etc., stated in this conspectus is exclusive of the 5 per cent. contribution payable to the General Fund of the University.

In this conspectus, by a College is meant a College recognized by this University, and by a graduate or undergraduate, a graduate or undergraduate of this University.

8. The Rao Sir Pragmalji Scholarships—

(Rs. 20 and 14 per mensem.)—Awarded annually to the first two in total amongst Cutchi candidates. (Failing one, or any such, to the first one or two among all Native candidates who have not obtained a Scholarship of equal or higher value.)—Tenable for three years at any College.

9. The Sir Jasvantsingji Scholarship—

(Rs. 14 and 10 per mensem.)—Awarded annually to the first two among those who pass after studying for two years continuously before Matriculation in any recognized High School in the Bhavnagar State, whether conducted by the State or by private agency.—Tenable for three years at any College.

10. The Sir George LeGrand Jacob Scholarship—

(Rs. 8 a month.)—Awarded annually to the highest among candidates from schools in Savantwadi, Cutch, Kolhapur or Kathiawar.—Tenable for a year at any College.

11. The Jairazbhoy Peerbhoy Scholarship—

(Rs. 216 per annum.)—Awarded annually to the highest among Mahomedan candidates.—Tenable for one year.—Scholar to prosecute studies at a recognized College or in Great Britain or Ireland.

12. The Sir Frank Souter Scholarship—

(Rs. 14 per mensem.)—Awarded annually to the first in Persian among Mahomedan candidates who may not have received a University Scholarship of equal or higher value.—Tenable for one year at any College.

13. The Bhau Saheb Desai Scholarships—

(Two of Rs. 10 each per mensem.)—Awarded annually to the two highest among candidates from a school in Nadiad.—Tenable for a year at any College.

14. The Kutchi Divan Bahadur Manibhai Prize—

(Rs. 80 in money or books.)—Awarded annually to the highest among Kutchi candidates.

15. The James Greaves Scholarship—

(Rs. 12 mensem.)—Awarded annually to the highest among candidates from a High School in Broach—Tenable for one year at any College.

16. The Divan Bahadur Lakshman Jagannath Vaidya Scholarship—

(Rs. 160 per annum.)—Awarded annually to the highest among Kayastha Prabhu candidates.—Tenable for a year at any College.

17. The Divan Bahadur Manibhai Cutch Memorial Technical Scholarship—

(Rs. 250 per annum.)—Biennial.—Awarded every *odd* year to the highest among candidates who matriculate from a High School in

Cutch.—Failing such a one, to the highest among Cutchis or Gujaratis, preference being given to Cutchis.—Tenable for two years.—Scholar to obtain the College First Year Certificate in the year following his Matriculation and in the following year to prosecute his studies for the B. Sc. Degree at a College.—Applications to be sent to the Registrar along with the University fee for the First Year Certificate Examination.

18. The Vallabhdas Valji Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest in Sanskrit among Bhatia candidates.—Failing Sanskrit, to the highest in English among candidates belonging to the same community.—Tenable for one year at any College.

19. The R. M. Sayani Khoja Testimonial Scholarship—

(Rs. 170 per annum.)—Awarded every year to the highest among Khoja Mahomedan candidates. To the next best, if the highest has obtained the Jairazbhoy Peerbhoy Scholarship or the Sir Frank Souter Scholarship, or either of the Rao Sir Pragmalji Scholarships.—Tenable for one year at any College.

20. The Dosabhai Framji Cama Scholarship—

(Rs. 190 per annum.)—Awarded every year to the highest among Parsi candidates within the first ten, and failing such a one, to the highest among all candidates.—Tenable for one year at any College.

21. The Bai Aimai K. R. Cama Scholarship—

(Rs. 190 per annum.)—Awarded annually to the highest in Avesta-Pahlavi among Parsi candidates.—Scholar to obtain the College First Year Certificate in the year following his Matriculation and in the following year to prosecute his studies in Avesta-Pahlavi in the Intermediate Arts Class of a College.—Tenable for one year.—Applications to be forwarded to the Registrar along with the University fee for the First Year Certificate Examination.

22. The Lord Sandhurst Scholarship—

(Rs. 142 per annum.)—Awarded annually to the highest among Memon Mahomedan candidates.—Tenable for one year at any College.

23. The Uttamram Memorial Scholarship—

(Rs. 12-8 per mensem.)—Awarded annually to the highest among *bona fide* Natives of Kathiawar in one of the four prescribed Science heads taken from year to year in the following rotation:—

(i) Elementary Physics and Chemistry, (ii) Elementary Botany and Zoology, (iii) Elementary Physiology and Hygiene, (iv) Domestic Science. (1931: Domestic Science).—Tenable for a year at any College.

24. The Narayan Mahadev Parmanand Prize (when not awarded for a Competitive Essay) —

(Rs. 200 in money or books.)—Awarded to the highest among Hindu women candidates.

25. The Ebrahim Nurdin Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest among Dawudi Bohra candidates.—Scholar to prosecute studies at a recognized College or in Great Britain or Ireland.

26. The Chatfield Scholarship—

(Rs. 24 per mensem.)—Awarded, whenever vacant, to the highest among the sons and daughters of the past or present Masters and Mistresses of a Government, Local Board, Municipal or Aided *Vernacular School*.—Tenable for the full period of the course selected by the scholar at any recognized College.

27. The Chatfield Prize—

(Rs. 100 in cash.)—Awarded annually to the highest among women candidates of purely Indian parentage.

28. The Rao Bahadur Karamsi Damji Scholarship—

(Rs. 250 per annum.)—Awarded annually to the highest among Cutchi Lohana candidates and failing such a one, to the highest among Cutchi Dassa Oswal Bania candidates.—Tenable for one year at any College.

29. The Abdulla Meheralli Dharamsi Khoja Testimonial Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest among Khoja Mahomedan candidates.—Scholar to obtain the College First Year Certificate in the year following his Matriculation and in the following year to prosecute his studies at any College.—Tenable for one year.—Applications to be sent to the Registrar along with the University fee for the First Year Certificate Examination.

30. The Miss Yamunabai Atmaram Dalvi Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest in Sanskrit among women candidates, and failing such a one, to the highest in Sanskrit among Saraswat Gauda (Shenwi) Brahmin candidates.—Tenable for a year at any College.

31. The Mrs. Gangubai R. V. Dhamnaskar Scholarship—

(Rs. 200 per annum.)—Awarded, whenever vacant,* to the highest among Maratha women candidates, and failing such a one, to the highest among Maratha men candidates.—Failing a Maratha candidate, to the highest among candidates belonging to the backward classes.—Tenable for the full period of graduation at any College.

32. The Rajaram Govindram Scholarship—

(Rs. 15 per mensem.)—Awarded annually to the highest among Visa Nagar Bania candidates, and failing such a one, to the highest in Sanskrit among Gujarati Hindu candidates.—Tenable for one year at any College.

* The next award is likely to be made in the year 1933.

33. The Sir Dinshaw Manockjee Petit (First Baronet) Scholarship—

(Rs. 210 per annum.)—Awarded annually to the highest in Avesta-Pahlavi.—Tenable for one year.—Scholar must prosecute his studies at an Arts College, taking Avesta-Pahlavi as his Second Language.

34. The Mangaldas Harivallabhdas Commerce Scholarship—

(Rs. 180 per annum.)—Awarded annually to the candidate who has passed the Matriculation Examination with the highest percentage of marks in the total from among the Hindu candidates who have joined the First Year Class of a College of Commerce.—Tenable for one year at such a College.

35. The George Pope Scholarship—

(Rs. 440 per annum.)—Awarded, whenever vacant,* to a *poor* but *promising* candidate who passes the examination with the highest total of marks from any school in the Bombay Presidency.—Tenable for the full period of graduation at an affiliated College, *i. e.*, seven years for the Medical course, five years for the Engineering course, and four years for any other course.

36. The Dinanath S. Manker Gold Medal—

Awarded annually to the candidate who passes the examination with the highest total of marks from among the candidates sent up by any Registered School in the town and island of Bombay.—Medallist must prosecute his studies at an affiliated College for a period of at least one year.

37. The Sardar Bhimrao Ramrao Akbarnawis Sanskrit Scholarship—

(Rs. 180 per annum.)—Awarded annually to a Brahmin candidate from any school in the Districts of Belgaum and Dharwar or the native States of Kolhapur and Sangli, who passes the examination with the highest number of marks in Sanskrit.—Tenable at any College for one year.

38. The Dr. Dadabhai Naoroji Scholarship—

(Rs. 300 per annum.)—Awarded annually to the highest in English among Indian women candidates.—Tenable for two years at any College.

39. The Edward Dalgado Scholarship—

(Rs. 180 per annum.)—Awarded annually to the candidate who passes with the highest number of marks in Portuguese.—To the candidate who has obtained a higher total of marks in the whole examination in the event of two candidates being bracketed together for getting the highest number of marks in Portuguese.—Tenable for three years at any College.

*The next award is likely to be made in the year 1932.

INTERMEDIATE EXAMINATION IN ARTS.

1. The Hughlings Prize—

(Rs. 80 in books.)—Awarded annually to the highest in English.

2. The Venayekrao Jugonnathji Sunkersett Prize—

(Rs. 180 in books.)—Awarded annually to the highest in Sanskrit.

3. The Varjivandas Madhavdas Sanskrit Scholarship—

(Rs. 180 per annum.)—Awarded annually to the highest in Sanskrit.—Tenable for a year.—Scholar must continue Sanskrit studies for the B.A. degree at a College.

4. The Melvill Memorial Scholarship (*when not awarded at the Intermediate Examination in Science.*)—

(Rs. 17 per mensem.)—Biennial.—Awarded every *even* year to the highest among candidates from Colleges in the Gaikwad territory.—Tenable for two years.—Scholar to prosecute his studies for the B.A. Degree at any College.

5. The Sir Frank Souter Scholarships—

(Rs. 14 each per mensem.)—Awarded annually to the two highest among Mahomedan candidates.—To the next best, if one of them has obtained the Ibrahimbhoy Rahimtulla Khoja Testimonial Scholarship.—Tenable for one year at any College.

6. The Majmudar Manishankar Kikani Sanskrit Scholarship—

(Rs. 8 per mensem.)—Biennial.—Awarded every *even* year to the highest in Sanskrit amongst candidates who, previous to Matriculation, studied for two years in a High School in Kathiawar.—To the next best, if the highest has obtained either the Varjivandas Madhavdas or the Bai Dayacore Morarbhoy Vijbhukhandas Scholarship.—Tenable for two years at any College.

7. The Bhavnagar Percival Scholarship—

(Rs. 10 per mensem.)—Awarded annually to the highest among such candidates from the Gujarat and Samaldas Colleges as have matriculated from a school in Nadiad or the Bhavnagar State.—Tenable for one year at any College.

8. The Divan Bahadur Manibhai Cutch Memorial Scholarship in Arts—

(Rs. 250 per annum.)—Biennial.—Awarded every *even* year to the highest among those who matriculated from a school in Cutch.—Failing such a one, to the highest among Cutchis or Gujaratis, preference being given to Cutchis.—Tenable for two years.—Scholar must prosecute his studies for the B.A. Degree at an Arts College.

9. The Wordsworth Scholarship and Prize—

(Scholarship, Rs. 20 per mensem ; and Prize, Rs. 45 in books.)—Awarded annually to the highest in Indian History and Adminis-

tration.—Scholarship tenable for one year.—Scholar to prosecute his studies for the B. A. Degree at an Arts College.

10. The Gangabai Bhat Scholarship—

(Rs. 156 per annum.)—Awarded annually to the highest among *unmarried* Hindu women candidates and failing such a one, to the highest among *unmarried* Hindu men candidates.—Tenable for one year at any College.

11. The Bai Dayacore Morarbhoj Vijbhukhandas Sanskrit Scholarship—

(Rs. 166 per annum.)—Awarded annually to the *second* highest in Sanskrit.—Tenable for one year at an Arts College.

12. The Framji Sorabji Bhavnagri Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest in Avesta-Pahlavi among Parsi candidates.—Scholar must prosecute his studies for the B. A. Degree, selecting Languages as his optional group and Avesta-Pahlavi as one of the Languages constituting the group.—Tenable for one year at an Arts College.

13. The Rao Bahadur Parvatishankar Manishankar Dave Scholarship—

(Rs. 13 per mensem.)—Awarded annually to the highest among Vadanagara Vaidik Nagar Brahmans, natives of the Surat District. Failing such a one, to the scholar of the previous year, and failing such a candidate, to the highest among Vadanagara Vaidik Nagar Brahmans of Gujarat, Kathiawar, Kachha and other places in that order.—Tenable for one year.—Scholar must continue his studies for the B. A. Degree at an Arts College.

14. The Ibrahimbhoy Rahimtulla Khoja Testimonial Scholarship—

(Rs. 284 per annum.)—Awarded annually to the highest among Khoja Mahomedan candidates.—Failing such a one, to the Scholar of the previous years.—Tenable for a year at any College.

15. The Shivchand Amarchand Talakchand Jain Literature Scholarship—

(Rs. 190 per annum.)—Awarded annually to the highest in Ardha-Magadhi.—Tenable for two years.—Scholar must prosecute his studies for the Honours Examination in Ardha-Magadhi for the B. A. Degree.

16. The Dr. F. G. Selby Memorial Scholarship—

(Rs. 180 per annum.)—Biennial.—Awarded every *even* year to the highest in Logic among candidates for a Scholarship.—To the candidate who has obtained a higher aggregate of marks in the whole examination in the event of two candidates being bracketed together for getting the highest marks in Logic.—Tenable for two years.—Scholar must prosecute his studies for the B.A. Degree, selecting Mental and Moral Philosophy as his optional group.

17. The Bai Jaiji Pallonji Lalcaca Scholarship.—

(Rs. 280 per annum.)—Awarded annually to the candidate who passes the examination with the highest total of marks from among all women candidates.—Scholar must prosecute her studies for the Honours Examination for the B. A. Degree at an affiliated College.—Tenable for two years.

B. A. EXAMINATION.**1. The Ellis Scholarship—**

(Rs. 20 per mensem.)—Awarded annually to the highest in Compulsory English, provided he passes with Honours in any one of the optional groups.—Tenable for a year.

2. The Duke of Edinburgh Fellowship—

(Rs. 420 per annum.)—Biennial.—Awarded every *even* year to the candidate who passes with the highest percentage of marks in the total and has taken First Class Honours.—Fellow must continue studies at a College and present himself for the M. A. Examination within the time of his Fellowship.—Tenable for two years.

3. The James Taylor Prize—

(Rs. 85 in books.)—Awarded annually to the candidate who passes with Honours with the highest number of marks in History and Economics.

4. The Bhau Daji Prize.—

(Rs. 170 in books.)—Awarded annually to the candidate who passes with First Class Honours and with the highest number of marks in all the *seven* papers in Sanskrit.

5. The Dhirajlal Mathuradas Scholarship—

(Rs. 200 per annum.)—Biennial.—Awarded every *odd* year to the candidate who passes with Honours with the highest percentage of marks in the total from among the Gujarati Hindu candidates.—Scholar must prosecute his studies in an affiliated Law College.—Tenable for two years.

6. The Narayan Vasudev Scholarship—

(Rs. 180 per annum.)—Awarded in alternate years to the candidate who passes with Honours with the highest number of marks in "Physics and Chemistry" and in "Botany and Zoology." (1931: Botany and Zoology).—Scholar must continue studies at any College.—Tenable for a year.

7. The Cobden Club Medal—

Awarded annually to the candidate who passes with Honours in Economics and obtains the highest number of marks in all the four papers in Economics in the optional group of History and Economics.

8. The Sir James Fergusson Scholarship in Arts—

(Rs. 50 per mensem.)—Awarded once in every four years* to the candidate who passes with First Class Honours and gains the highest percentage of marks in the total, and also when there is no suitable candidate at B.Sc.—Scholar must continue studies at a College or otherwise with the approval of the Syndicate.—Tenable for two years.

9. The Pherozechah Merwanji Jijibhai Avesta and Pahlavi Scholarship—

(Rs. 190 per annum.)—Awarded annually to the highest in Avesta-Pahlavi among Parsi candidates.—Scholar must continue studies at any College.—Tenable for one year.

10. The Sir Lawrence Jenkins Scholarship (*when not awarded at the M. A. Examination*)—

(Rs. 236 per annum.)—Divided equally between two candidates who pass with Honours with the highest percentage of marks from among the candidates for the Scholarship.—Tenable for two years at a Law College.

11. The Pralhad Sitaram Patwardhan Scholarship—

(Rs. 310 per annum.)—Biennial.—Awarded every *odd* year to the candidate who passes with Honours with the highest number of marks in the optional group of Mental and Moral Philosophy from among candidates whose mother tongue is Marathi.—Tenable for two years at an Arts College.—Scholar must prosecute his studies for the M. A. Examination in Philosophy.

12. The Gangadas Rangildas Scholarship—

(Rs. 400 per annum.)—Awarded annually to the candidate who passes with Honours with the highest percentage of marks in the total from among the Hindu candidates.—To the next best, if the highest has obtained the Duke of Edinburgh Fellowship, or the Sir James Fergusson Scholarship in Arts, or the Dhirajlal Mathuradas Scholarship.—Tenable for one year.

13. The Pragji Thackersey Moolji Science Scholarship (*in Arts*)—

(Rs. 168 per annum.)—Awarded annually to the candidate who passes the examination with Honours and obtains the highest number of marks in one of the optional Science groups.—To the next best if the highest has obtained the Narayan Vasudev Scholarship.—Scholar must prosecute his studies in Science at an affiliated College or otherwise as may be approved by the Syndicate.—Tenable for one year.

14. The Miss Sokaribai S. Mankar Scholarship (*when not awarded at the M. A. or Final M. B., B. S. Examination*)—

(Rs. 300 per annum.)—Awarded to the candidate who passes with Honours with the highest percentage of marks in the total from among the women candidates.—Tenable for one year.

*The next award will be in 1931.

15. The Lord Minto Scholarship—

(Rs. 400 per annum.)—Biennial.—Awarded every *odd* year to the candidate who passes with First Class Honours and obtains the highest number of marks in the optional group of History and Economics.—Scholar must prosecute his studies for the M. A. Examination in groups (a) and (c) or (a) and (d) of Branch II (History) or undertake to offer a thesis for the M. A. Degree in that Branch on a subject connected with Politics or Sociology.

To a Graduate of the Degree of B. A. or B. Sc.

The Mohobat Fellowship—

(Rs. 100 per mensem.)—Biennial.—Fellow to be selected from the B.A.'s and B. Sc.'s of the year of the award and the year previous. Preference to be given to a Mahomedan, and a Hindu from Kathiawar, Gujarat and the Deccan in that order.—Tenable for two years.—To be appointed, as a general rule, to the Bahauddin College, Junagadh.

M. A. EXAMINATION.

1. The Bhugwandass Purshotumdass Sanskrit Scholarship—

(Rs. 720 per annum.)—Awarded annually to the highest in Sanskrit, provided he be specially recommended by the Examiners.—Tenable for a year.

2. The Chancellor's Medal—

Assigned to a particular branch of study in a particular year * and awarded to the highest in that branch in Class I. Failing such a candidate, to the highest in Class I in other branches.

3. The Jamsetji Nesserwanji Petit Scholarship—

(Rs. 340 per annum.)—Awarded annually to the highest in Avesta-Pahlavi.—Tenable for a year.

4. The Sujna Gokulji Zala Vedanta Prize—

(Rs. 400 in cash.)—Awarded annually to the candidate reported by the Examiners as most proficient in the portion of the Vedanta of Shankaracharya prescribed for the examination, and as having shown conspicuous merit therein.

5. The Kashinath Trimbak Telang Gold Medal and Prize—

Awarded in alternate years to the highest in History or Philosophy in class I or II (1931 : Philosophy).

6. The Sir Lawrence Jenkins Scholarship—

(Rs. 236 per annum.)—Awarded annually to the highest among the candidates for the Scholarship. Tenable for two years at a Law College.

7. The Miss Sokaribai S. Mankar Scholarship—

(Rs. 300 per annum.)—Awarded annually to the highest among women candidates.—Tenable for one year.

* 1931 : Philosophy.

8. The Sir William Wedderburn Scholarship—

(Rs. 680 per annum.)—Awarded annually to the graduate of this University who passes the examination with the highest total of marks in Branch II (History).—Tenable for one year.

9. The Sir Pherozechah M. Mehta Research Scholarship—

(Rs. 850 per annum.)—Awarded triennially* to the graduate of this University who passes the examination with the highest total of marks in Branch II (History) on condition that he does research work in either History or Economics to the satisfaction of the Academic Council during his tenure of the Scholarship.—The scholar to submit at the end of each year, for approval by the Academic Council, a full report of the research work done by him during the year.—Tenable for three years.

10. The Shridhar Ramkrishna Bhandarker Prize—

(Rs. 325 in cash.)—Awarded annually to the candidate who passes the examination in Sanskrit with the highest marks in *Vyakarana Shastra*, or failing a successful candidate in that *Shastra*, to the one who gets highest marks in the papers comprising the Vedanta *Shastra* of Sankara and Ramanuja.

INTERMEDIATE EXAMINATION IN COMMERCE.

1. The Mangaldas Harivallabhdas Commerce Scholarship—

(Rs. 180 per annum.)—Awarded annually to the highest among Hindu candidates.—To the next best, if the highest has obtained one of the Sir James Begbie Scholarships.—Tenable for one year at a College of Commerce.

2. The Sir James Begbie Scholarship in Commerce—

(Rs. 280 per annum.)—Biennial.—Awarded alternatively with No. 3—Awarded every *odd* year to the highest among Natives of India, provided he is not or shall not be the recipient of any other Scholarship in Commerce from among the Endowments of the University at any time during the period of his tenure.—To the next best in the event of the highest being or becoming the recipient of any other University Scholarship in Commerce or resigning his claim to this Scholarship.—Tenable for two years at a College of Commerce.

3. The Sir James Begbie Scholarship in Advanced Banking—

(Rs. 280 per annum.)—Biennial.—Awarded alternatively with No. 2.—Awarded every *even* year to the highest among Natives of India, provided he is not or shall not be the recipient of any other Scholarship in Commerce from among the Endowments of the University at any time during the period of his tenure.—To the next best in the event of the highest being or becoming the recipient of any other University Scholarship in Commerce or resigning his claim to this Scholarship.—Scholar must select Advanced Banking as his special subject for the B. Com. Examination.—Awarded as a Scholarship in Commerce,

*The next award will be due in 1933.

irrespective of the special subject, if there be no applicant for Advanced Banking.—Tenable for two years at a College of Commerce.

4. The Sir Ibrahim Rahimtoola Commerce Scholarship—

(Rs. 324 per annum.)—Biennial.—Awarded every *even* year to the highest, provided he is not or shall not be the recipient of any other scholarship in Commerce from among the Endowments of the University at any time during the period of his tenure.—To the next best, in the event of the highest being or becoming the recipient of any other University Scholarship in Commerce or resigning his claim to this Scholarship.—Tenable for two years at a College of Commerce.

To a Hindu Student in the Second Year Class of an affiliated College of Commerce.

The Mangaldas Harivallabhdas Commerce Scholarship—

(Rs. 180 per annum.)—Awarded annually to the candidate who passes the examination held by a College of Commerce at the end of the second year of the Commerce course with the highest number of marks from among the Hindu candidates.—If there be no such examination at a College of Commerce, the Scholarship to be awarded by the Syndicate to the candidate whom they consider most deserving from among the Hindu candidates recommended by the Heads of such Colleges.—To the next best, if such candidate has obtained one of the Sir James Begbie Scholarships.—Tenable for one year at a College of Commerce.

B. COM. EXAMINATION.*

The Mangaldas Harivallabhdas Commerce Prizes (*to be awarded only when the surplus to the credit of the Mangaldas Harivallabhdas Scholarship Endowment exceeds Rs. 50.*)—

(Rs. 50 each)—Awarded to one or more Hindu candidates who pass the examination with the highest number of marks.

INTERMEDIATE EXAMINATION IN SCIENCE.

1. The Gibbs Prize—

(Rs. 70 in books.)—Awarded annually to the highest in Physics.—To the next best, if the highest has obtained the Sir Dinshaw Manockjee Petit (First Baronet) Science Scholarship.

2. The Melvill Memorial Scholarship—

(Rs. 17 per mensem.)—Biennial.—Awarded every *even* year to the highest among candidates from Colleges in the Gaikwad territory.—Tenable for two years.—Scholar to prosecute his studies for the B. Sc. degree at a College.

* Awards are made on the results of the examination held in March.

3. The Bai Shirinbai Ratansha Parakh Scholarship—

(Rs. 20 per mensem.)—Awarded *every fourth year** to the highest among Parsi women candidates in the B Group.—Failing such a one, to the highest among Indian, or any other women candidates in the same Group, preference being given to an Indian.—To the next best qualified candidate if the highest has obtained another Scholarship of the same or higher value.—Tenable for four years at a Medical College.

4. The Mrs. Satyavati Lallubhai Samaldas Scholarship—

(Rs. 160 per annum.)—Awarded annually to the highest among Hindu women candidates in the B Group, provided she has obtained no other Scholarship of equal or higher value, and to any other woman candidate, failing a Hindu.—Tenable for one year at a Medical College.

5. The Sir Dinshaw Manekji Petit Medical Scholarship—

(Rs. 210 per annum.)—Awarded annually to the highest among women candidates in the B Group.—Tenable for one year at a Medical College.

6. The Sir Dinshaw Manockjee Petit (First Baronet) Science Scholarship—

(Rs. 225 per annum.)—Awarded annually to the highest in the First Class.—Tenable for two years.—Scholar must continue his studies for the B. Sc. Degree at a College.—To be awarded at the discretion of the Syndicate to the one who, on account of his pecuniary circumstances, is in greater need of the Scholarship, in the event of two candidates being bracketed together for having got the highest number of marks.

7. The Noormahomed Jairazbhoy Peerbhoy Scholarship—

(Rs. 228 per annum.)—Awarded annually to the highest among Khoja Mahomedan candidates in the B Group—Failing a successful Khoja Mahomedan candidate at this and the Intermediate M. B., B. S. Examination, to the highest among all Mahomedan candidates in the same Group.—Tenable for one year at a Medical College.

8. The Pestonji Hormasji Cama Scholarship—

(Rs. 210 per annum.)—Awarded every year to the highest among *poor* Parsi female candidates in the B Group, and failing such a one, to the highest among *poor* Hindu or Mahomedan women candidates in the same Group.—Scholar to prosecute her studies for the M. B., B. S. degrees at an affiliated College.—Tenable for five years.

9. The Byramjee Nusserwanjee Koyajee Scholarship and Silver Medal.

(Scholarship worth Rs. 174 per annum.)—Awarded annually to the highest among Parsi candidates in the B Group.—Scholar to prosecute his studies for the M. B., B. S. degrees at an affiliated College.—Tenable for one year.

10. The Dr. Ismail Jan Mahomed Scholarship—

(Rs. 170 per annum.)—Awarded annually to the highest among Mahomedan candidates in the B Group.—Scholar to prosecute his

* The next award will be in 1933.

studies for the M. B., B. S. degrees at an affiliated College.—Tenable for one year.

11. The Dr. Tribhowandas Motichand Shah Scholarship*—

(Rs. 285 per annum.)—Awarded *every fifth year* to the highest among Jain candidates in the B Group, provided he has not obtained any other University Scholarship.—Failing a Jain, to the highest among Hindu candidates in the B Group.—Scholar to prosecute his studies for M. B., B. S. degrees at an affiliated College.—Tenable for five years.

B. Sc. EXAMINATION.

1. The Sir James Fergusson Scholarship in Arts—

(Rs. 50 per mensem.)—Award to be alternative with that at B. A.—Awarded once in every four years† to the candidate who passes in the First Class with distinction in his Principal subject and the highest number of marks therein, and also when there is no suitable candidate at the B. A. In other respects exactly as at the B. A. [See B. A. No. 8, page 338.]

2. The Pragji Thackersey Moolji Science Scholarship—

(Rs. 408 per annum.)—Awarded annually except for the year in which the Sir James Fergusson Scholarship falls to be awarded.—Assigned to one of the Principal subjects prescribed for the examination and awarded to the candidate who passes in the First Class with distinction in the subject notified for the year and obtains therein the highest number of marks.—In the absence of a qualified candidate in the Principal subject notified for the year, the Academic Council is authorized to award the Scholarship to the candidate who, on a review of the examination in the other Principal subjects, passes in the First Class with distinction and obtains the highest number of marks.—Scholar must prosecute his studies for the M. Sc. Degree at a College affiliated to the University or otherwise with the approval of the Academic Council.—Tenable for one year.

3. The Sardar Bhimrao Ramrao Akbarnawis Science Scholarship—

(Rs. 480 per annum.)—Biennial.—Awarded every *odd year* to the Brahmin candidate from any of the districts of Belgaum, Dharwar, Kolhapur and Sangli who passes the examination with the highest total of marks in the Principal subject. To the next best if the highest has obtained the Sir James Fergusson or the Pragji Thackersey Moolji Science Scholarship.—Tenable for two years.—Scholar must prosecute his studies for the M. Sc. Examination at a recognized College or Institution and submit half-yearly reports on the original work done by him during the session.

* The next award will be made in 1934.

† The next award will be made in 1931.

M. Sc. EXAMINATION.

1. The Moos Medal—

Assigned every year to a specified branch of study and awarded to the candidate who passes with distinction and stands highest in the list of candidates in the branch notified for the year. (1931: Botany; 1932: Chemistry).—Failing a qualified candidate in the branch of study notified for the year, the Syndicate is authorized to award the Medal to the candidate who, on a review of the examination, passes with distinction in one of the other prescribed branches of study.—Any surplus to the credit of the Endowment to be applied by the Syndicate to encourage original work for the M. Sc. Examination in the shape of research grants.

2. The Sardar Bhimrao Ramrao Akbarnawis Research Scholarship—

(*Vide* No. 3 under “Travelling Fellowship and Scholarships of a similar nature,” page 351.)

3. The Ratanji Ranchhodji Desai Gold Medal—

Awarded annually to the candidate who passes the examination with distinction and stands highest in the list of candidates in the Chemistry branch.—To the next best in the event of the highest being the recipient of the Moos Medal.

M. Ag. EXAMINATION.

The Sardar Bhimrao Ramrao Akbarnawis Research Scholarship—

(*Vide* No. 3 under “Travelling Fellowship and Scholarships of a similar nature,” page 351.)

F. E. EXAMINATION.

1. The Kahandas Muncharam Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest among Gujarati Hindu candidates.—Tenable for one year at an Engineering College.

2. The Colonel Patrick French Scholarship—

(Rs. 200 per annum.)—Awarded annually to the highest.—Tenable for a year at an Engineering College.

S. E. EXAMINATION (CIVIL).

1. The Nusserwanji Jehangirji Wadia Scholarship—

(Rs. 200 per annum.)—Awarded every *odd* year to the highest among Parsi candidates.—Tenable for one year at an Engineering College.

2. The Rao Bahadur Rajadhyaksha Scholarship—

(Rs. 300 per annum.)—Awarded annually to the candidate who passes the examination with First Class Honours and secures the highest number of marks.—Tenable for one year at an Engineering College.

3. The Theodore Cooke Memorial Prize—

(Rs. 200 per annum.)—Awarded to the second best candidate at the examination.—Tenable for one year at an Engineering College.

B. E. EXAMINATION (CIVIL).*

1. The James Berkley Gold Medal and Prize—

(Medal and Prize of books on Engineering together worth Rs. 370.)—Awarded annually to the highest.

2. The Jamshedji Dorabji Naegamvala Prize—

(Rs. 100 in books).—Awarded annually to the highest in Drawing.

Theodore Cooke Memorial Prize—

(Rs. 300 per annum.)—Awarded to the second best candidate at the examination.—Tenable for one year at an Engineering College.

B. E. EXAMINATION (MECHANICAL).*

The Merwanji Framji Panday Scholarship—

(Rs. 18 per mensem.)—Awarded annually to the highest.—Tenable for one year.

M. E. EXAMINATION.

1. The Sardar Bhimrao Ramrao Akbaranawis Research Scholarship—

(*Vide* No. 3 under "Travelling Fellowship and Scholarships of a similar nature," page 351.)

2. The Rao Bahadur Rajadhyaksha Gold Medal—

Awarded annually to the candidate who passes the examination with the highest distinction.

FIRST LL.B. EXAMINATION.†

1. The Kinloch Forbes Gold Medal and Prize—

(Medal and Prize of Law books together worth Rs. 400.)—Awarded annually to the highest among candidates getting 60 per cent.

* Awards are made on the results of the examination held in March.

† Awards are made on a comparison of the results of the examinations held in October and April in every academical year.

marks or more in the papers on Roman Law and Jurisprudence taken together.

2. The Nandashankar Parvatishankar Dave Scholarship—

(Rs. 10 per mensem.)—Awarded annually to the highest among Vadanagara Vaidik Nagar Brahmans, natives of the Surat District. Failing such a one, to the highest among Vadanagara Vaidik Nagar Brahmans of Gujarat, Kathiawar, Cutch, and other places in that order.—Tenable for one year.—Scholar must prosecute his studies for the LL.B. degree at a Law College.

3. The Sohrab Khorshed Dastur Scholarship—

(Rs. 324 per annum.)—Awarded annually to the highest in the paper on Constitutional Law.—In the event of more than one candidate getting the same number of marks, to the one who gets the highest total.—Tenable for one year.—Scholar must prosecute his studies for the Second LL.B. Examination at a Law College.

SECOND LL.B. EXAMINATION*.

1. The Arnould Scholarship—

(Rs. 17 a month.)—Awarded annually to the highest in the paper on Succession and Family Rights.—Tenable for a year.

2. The Judge Spencer Prize—

(Rs. 150 in books.)—Awarded annually to the highest.

3. The Mancherji Nowroji Banaji Scholarship—

(Rs. 170 per annum.)—Awarded annually to the highest among Parsi candidates in the paper on Equity, provided he obtains not less than 50 per cent. marks in that paper.—Tenable for one year.

4. The Sir Mangaldas Nathubhai Legal Scholarship—

(Rs. 880 per annum.)—Triennial.—Awarded every *third* year to the highest on condition that he prosecutes his legal studies with a view to qualify for admission as an Advocate of the High Court of Bombay.—Tenable for three years.

5. The Sir Narayan Chandavarkar Hindu Law Scholarship—

(Rs. 550 per annum.)—Biennial.—Awarded every *odd* year to the candidate who passes the examination in the First Class with the highest number of marks in the paper comprising Hindu Law.—Scholar must prosecute his studies for the LL.M. Degree examination in the Branch comprising Hindu Law.

*Awards are made on a comparison of the results of the examinations held in October and April in every academical year.

FIRST M. B., B. S. EXAMINATION.*

1. The Sir James Ferguson Scholarship in Medicine—

(Rs. 25 per mensem.)—Awarded annually to the highest among women candidates.—Tenable for one year.—Scholar must continue her studies at a Medical College or otherwise with the approval of the Syndicate.

2. The Lady Reay Medical Scholarship—

(Rs. 10 per mensem.)—Awarded annually to the highest in Physiology and Histology among women candidates.—Tenable for one year at a Medical College.

3. The Nusserwanji Jehangir Wadia Scholarship—

(Rs. 200 per annum.)—Awarded every *even* year to the highest among Parsi candidates.—Tenable for one year at a Medical College.

4. The Noormahomed Jairazbhoy Peerbhoy Scholarship
(*when not awarded to a Khoja Mahomedan at the Intermediate Science Examination*)—

(Rs. 228 per annum.)—Awarded to the highest among Khoja Mahomedan candidates.—Tenable for one year at a Medical College.

FINAL M. B., B. S. EXAMINATION.†

1. The Charles Morehead Prize—

(Rs. 150 in money or books.)—Awarded annually to the highest in Clinical Medicine.

2. The Balkrishna Sudamji Prize—

(Rs. 150 in money or books.)—Awarded annually to the highest in Midwifery and Diseases of Women and Children.

3. The Viceroy's Silver Medal—

Awarded to the highest among women candidates.

4. The Scholarship of the Medical Women for India Fund of 1883—

(Rs. 120 per annum.)—Awarded annually to the highest among women candidates.—Tenable for a year.

5. The Lady Reay Silver Medal—

Awarded annually to the highest among women candidates.

6. The Bai Shirinbai Ratansha Parakh Medal and Prize—

Awarded to the highest among male candidates in Class I in the year following that in which the Scholarship is not awarded.

* Awards are made on the results of the examination held in December.

† Awards are made on the results of the examination held in December in Part II and in September in Part I of the previous year.

7. The Bai Hirabai Pestanji Hormasji Cama Gold Medal—

Awarded to the highest among women candidates in Surgery or Midwifery in alternative years. (1931 : Midwifery ; 1932 : Surgery.)

8. The J. C. Lisboa Gold Medal—

Awarded annually to the highest in Surgery among men candidates.

9. The Lord Sandhurst Gold Medal—

Awarded annually to the highest in Pathology and Bacteriology.

10. The Miss Sokaribai S. Mankar Scholarship (*when not awarded at the M. A. Examination*)—

(Rs. 300 per annum.)—Awarded to the *second* highest among female candidates.—Tenable for one year.

M. D. AND M. S. EXAMINATIONS.

The Prince of Wales Gold Medal and the Hansraj Pragji Thackersey Prince of Wales Fellowship—

(Fellowship worth Rs. 1,200 per annum.)—Assigned by the Syndicate in rotation to the M. D. (Medicine), M. S., and M. D. (Midwifery), M. D. (Pathology) Examinations: [1931 : M. D. (Midwifery) ; 1932 : M. D. (Medicine)] and awarded to the candidate who passes the examination with distinction in the Branch notified for the year and is reported by the Examiners as most deserving of the Medal.—Failing a candidate who has passed with distinction in the Branch notified for the year, the Syndicate is authorized to award the Medal and Fellowship to a candidate who passes with distinction in some other Branch, and, failing such a candidate, to the candidate who passes without distinction in the Branch notified for the year and who is reported by the Examiners as most deserving.—Fellow to deliver a course of lectures on a medical subject to be selected by him and approved by the Syndicate. Fellowship tenable for one year.

FOR ESSAYS, ETC.

1. The Manockji Limji Gold Medal and Prize—

(Medal and prize, together worth Rs. 600. The winner has the option of taking the prize in cash or books.)—For the best essay by a graduate of not more than five years' standing on a prescribed subject which in alternate years will be (a) some question of Indian History or Antiquities, and (b) some question connected with the introduction into India of European Science and Art.

2. The Homejee Cursetjee Dady Prize—

(Rs. 600, of which Rs. 300 must be taken in books and the balance in cash or books.)—For the best essay by a graduate or

undergraduate of not more than ten years' standing from Matriculation on a prescribed subject, which will be literary or historical or, every alternate year, scientific.

3. The Karsandas Mulji Prize—

(Rs. 275, of which Rs. 150 must be taken in books and the balance in cash or books.)—For the best essay by a graduate or undergraduate of not more than six years' standing from Matriculation on some prescribed moral or social subject.

4. The Dossabhai Hormusji Cama Prize—

(Rs. 800, of which Rs. 500 must be taken in books and the balance in cash or books.)—Biennial.—For the best essay on some prescribed medical subject by a graduate in Medicine.

5. The Sir George LeGrand Jacob Prize—

(Rs. 350, of which Rs. 250 must be taken in books and the balance in cash or books.)—For the best essay by a graduate or undergraduate of not more than seven years' standing from Matriculation on some prescribed subject illustrating or relating to the advantages derived by India from British Rule.

6. The Ashburner Prize—

(Rs. 240 in cash or books.)—For the best essay by a graduate of not more than seven years' standing on some prescribed subject connected with Indian arts, manufacture, or agriculture.

7. The Vishvanath Narayan Mandlik Gold Medal and Prize—

(Medal and Prize together worth Rs. 400. The winner has the option of taking the Prize in cash or books.)—For the best essay by a graduate of not more than ten years' standing on some prescribed subject connected with Sanskrit Literature.

8. The Sujna Gokulji Zala Vedanta Prize (*when not awarded at the M. A.*)—

For the best essay on some prescribed subject connected with Advaita Vedanta or for the best translation or edition of a selected work.

9. The Bai Hirabai Pestanji Hormasji Cama Prize (*when the funds permit*)—

For the best essay by a woman graduate on a prescribed subject connected with the diseases of women and children.

10. The Pandit Bhagavanlal Indraji Gold Medal and Prize—

(Medal and Prize, together worth Rs. 400. The winner has the option of taking the Prize in cash or books.)—For the best essay by a graduate of not more than fifteen years' standing on some prescribed subject connected with Indian Epigraphy, Antiquities or Archæology.

11. The Narayan Mahadev Parmanand Prize—

(Rs. 200 in money or books.)—For the best essay by any person who has passed any University examination, in Marathi or Gujarati alternately, on some prescribed subject connected with Indian Social Reform, Philosophy and History of Religions, History, Biography, or Indian Economics.

12. The Sir Jamsetjee Jeejeebhoy (Third Baronet) Prize—

(Rs. 1,100 in cash.)—Awarded every *tenth* year for the best essay by a graduate or undergraduate or member of any University on some prescribed Iranian subject.

RESEARCH SCHOLARSHIPS.
1. The Springer Research Scholarship—

(Rs. 100 per mensem.)—Awarded alternately for a scientific subject, and a literary subject connected with Indian Archæology and Epigraphy (with special reference to historical research), or with Pali, Sanskrit, or Prakrit Scholarship.—Open to all Graduates of the University of Bombay.—Tenable for two years.—Extension of the period of tenure may be granted at the discretion of the Syndicate.

2. The Sardar Bhimrao Ramrao Akbarnawis Research Scholarship—

(*Vide* No. 3 under "Travelling Fellowship and Scholarships of a similar nature," page 351.)

3. The Sir Pherozeshah Mehta Research Scholarship—

(*Vide* No. 9 under M. A., page 340.)

4. The Ratanji Ranchhodji Desai Research Fellowship—

(Rs. 550 per annum.)—Biennial.—Awarded every *even* year.—Open to competition by members of the staff of the Seth Gordhandas Sunderdas Medical College, Bombay, and by all Graduates in Medicine of *this* University. The Fellow must, as a general rule, carry out research work in Tuberculosis at the Seth Gordhandas Sunderdas Medical College and submit his report at the end of each year.—Tenable for two years. Extension of the period of tenure, not exceeding two years, may be granted at the discretion of the Syndicate.

5. The Rao Bahadur Rajadhyaksha Gold Medal (*when not awarded at the M. E. Examination—*

Awarded for original work or research in any Engineering subject. Open to any Engineer practising in India or whose work is of a particular value to Engineering in India. Names to be recommended to the Syndicate by the Engineering Board of Studies in consultation, if necessary, with the Institution of Engineers (India) and to be based on any work published or executed.

TRAVELLING FELLOWSHIP AND SCHOLARSHIPS OF A SIMILAR NATURE.

1. The Mangaldas Nathubhoy Travelling Fellowship.--

(Rs. 700 a year *plus* accumulations.)—Triennial.*—Tenable for three years.—Appointment made by the Syndicate by selection out of applicants.—Candidates must be Hindu graduates of not more than five years' standing.

2. The Sir Mangaldas Nathubhai Scholarships.—

(Two every year and an additional one every third year, each of the annual value of Rs. 2,000.)—Open to Hindu graduates only.—Tenable for three years in England.—Extension of the period of tenure up to a maximum of two years may be granted at the discretion of the Syndicate.—Scholars must reside in England for the purpose of receiving technical education.

3. The Sardar Bhimrao Ramrao Akbarnawis Research Scholarship.—

(Rs. 2,400 per annum.)—Triennial.—Awarded once every three years† for research studies to the best Brahmin candidate from the districts of Belgaum, Dharwar, Kolhapur and Sangli who passes the M. A. Examination in Mathematics or M. Sc., M. E. or M. Ag. Examination, provided that in the opinion of the Syndicate such candidate is likely to be benefited by holding the Scholarship.—Tenable for three years.—Scholar must proceed to Europe or America and reside there for the purposes of research work.

4. The Sir Currimbhoy Ebrahim and Bai Khanoobai Noor-mahomed Jairazbhoy Peerbhoy Scholarships.—

(Three Scholarships, each of the value of Rs. 3,600 per annum.)—One in the name of Sir Currimbhoy Ebrahim and *two* in the name of Bai Khanoobai Noormahomed Jairazbhoy Peerbhoy.—Awarded

* The next award will be in 1932.

† Do. do. do. 1933.

annually for higher studies in foreign countries for Medicine, Philology, Ancient History, Arabic, Architecture, Town Planning and Technological and Industrial subjects as well as in the Superior Services, to Mahomedan Graduates of this University of not more than seven years' standing from the date of graduation who are *bona fide* natives of the Bombay Presidency.—Tenable for three years. An extension of tenure may be granted at the Syndicate's discretion.—Each Scholar to effect an insurance of his life for the total amount of advance and to repay the amount, with or without interest at the discretion of the Syndicate, after completion of his studies.

THE EDULJEE DINSHAW SCHOLARSHIPS.

(13 Scholarships of the aggregate value of Rs. 24,000 per annum.)—Open to members of the Parsi community (professing the Zoroastrian Faith) in the following order.—To Parsis permanently residing in Karachi; failing such Parsis, to Parsis permanently residing in Poona and, failing Parsis of either of these two cities, to Parsis of any other part of India.—Tenable for three years.—Extension of one year may be granted by the Syndicate on sufficient grounds.—The Scholarships are distributed as under:—(a) Four Scholarships of Rs. 50 each per month for secondary technical education, (b) Three Scholarships of Rs. 70 each per month for higher technical education, (c) Three Scholarships of Rs. 130 each per month for postgraduate technical work in India, and (d) Three Scholarships of Rs. 400 each per month for technical study in foreign countries.—Scholarships to be awarded during the first three years: *First year*.—Two Scholarships of Rs. 50 each per month, one of Rs. 70 per month, one of Rs. 130 per month and one of Rs. 400 per month. *Second year*.—One of Rs. 50 per month, one of Rs. 70 per month, one of Rs. 130 per month and one of Rs. 400 per month. *Third year*.—One of Rs. 50 per month, one of Rs. 70 per month, one of Rs. 130 per month and one of Rs. 400 per month. Scholarships to be distributed in this order in a cycle of three years, except that an additional Scholarship of Rs. 130 per month will be awarded every fourth year.

Candidates for Scholarship (a) must have passed the Matriculation Examination and been admitted to the Victoria Jubilee Technical Institute, Bombay, or Poona or Karachi College of Engineering Workshop classes, or the Poona Agricultural College Diploma course or any other institution recognized by the Syndicate.—Candidates for Scholarship (b) must have passed the Intermediate Examination in Science and been admitted to the College of Engineering at Poona or Karachi or the College of Agriculture at Poona.—Candidates for Scholarship (c) must have passed the B.E., B.Ag. or B.Sc. Examination of any Indian University with at least Second Class Honours and must be Graduates of not more than ten years' standing from the date of their first passing a Degree Examination.—Candidates for Scholarship (d) must have passed the M. E., M. Ag. or M. Sc. Examination of any Indian University and must be Graduates of not more than ten years' standing from the date of their first passing a Degree Examination.

CHAPTER XIV.—A STATEMENT OF ENDOWMENT & TRUST FUNDS.

[Note.—Except where otherwise stated, securities appertaining to the Endowment Fund are held in $3\frac{1}{2}$ per cent. Government paper.]

	Rs.
I. The Mangaldas Nathoobhoy Travelling Fellowship	20,000
II. The Manockjee Limjee Gold Medal (Rs. 11,800 in $3\frac{1}{2}$ per cent. G. P. Notes and Rs. 5,000 in $6\frac{1}{2}$ per cent. Bombay Development Loan)	16,800
III. The Bhugwandass Purshottumdass Sanskrit Scholarship	22,600
IV. The Homejee Cursetjee Dady Prize (Rs. 14,000 in $3\frac{1}{2}$ per cent. G. P. Notes and Rs. 3,900 in $6\frac{1}{2}$ per cent. Bombay Development Loan)	17,900
V. The Jugonnath Sunkersett Sanskrit Scholarships	22,300
VI. The Jam Shri Vibhaji Scholarship	5,400
VII. The Cowasjee Jehangir Latin Scholarship	5,400
VIII. The Kinloch Forbes Gold Medal	11,600
IX. The David Sassoon Hebrew Scholarship	7,300
X. The James Berkley Gold Medal	11,300
XI. The Ellis Prize	1,700
XII. The Herbert and LaTouche Scholarship	5,500
XIII. The Wilson Philological Lectureship	26,000
XIV. The Ellis Scholarship	8,700
XVI. The Arnould Scholarship	6,100
XVII. The Duke of Edinburgh Fellowship	12,700
XVIII. The Bai Maneckbai Byramjee Jeejeebhoy Prize	2,000
XIX. The Rao Sir Pragmalji Scholarships	38,000
XX. The Sir Jasvantsingji Scholarships	26,900
Carried forward	2,68,200

			Rs.
	Brought over	...	2,68,200
XXI.	The Karsandas Mulji Prize (Rs 7,500 in 3½ per cent. G. P. Notes and Rs. 1,600 in 6½ per cent. Bombay Development Loan)	...	9,100
XXII.	The Dossabhoy Hormusjee Cama Prize (Rs. 9,500 in 3½ per cent. G. P. Notes and Rs. 2,400 in 6½ per cent. Bombay Development Loan)	... ..	11,900
XXIII.	The Hughlings Prize	... ..	2,600
XXIV.	The James Taylor Prize	... ..	2,600
XXV.	The Bhau Daji Prize	... ..	5,600
XXVI.	The Venayekrao Jugonnathji Sunkersett Prize		5,500
XXVII.	The Merwanjee Framjee Panday Scholarship		6,200
XXVIII.	The Kahandas Mancharam Scholarship	...	6,300
XXIX.	The Dhirajlal Mathuradas Scholarship	...	7,200
XXXI.	The Gibbs Prize	... ..	2,100
XXXII.	The Narayan Vasudev Scholarship	...	5,300
XXXIV.	The Sir George LeGrand Jacob Scholarship		3,100
XXXV.	The Sir George LeGrand Jacob Prize (Rs. 8,600 in 3½ per cent. G. P. Notes and Rs. 1,800 in 6½ per cent. Bombay Development Loan)	... ..	10,400
XXXVI.	The Jairajbhoy Peerbhoy Scholarship	...	6,500
XXXVII.	The Varjivandas Madhavdas Sanskrit Scholarship	... ..	6,400
XXXVIII.	The Jamshedjee Dorabjee Naegamvala Prize		3,000
XXXIX.	The Melvill Memorial Scholarship	...	6,100
XL.	The Sir Frank Souter Scholarship	...	15,700
XLI.	The Charles Morehead Prize	... ..	6,300
XLII.	The Balkrishna Sudamji Prize	... ..	6,300
XLIII.	The Bhagvatsingji Collection of Sanskrit Manuscripts	... ..	13,400
	Carried forward	...	4,09,800

		Rs.
	Brought over ...	4,09,800
XLIV.	The Majmudar Manishankar Kikani Sanskrit Scholarship ...	3,300
XLV.	The Bhavnagar Percival Scholarship ...	3,800
XLVI.	The Bhausahab Desai Scholarship ...	8,100
XLVIII.	The Ashburner Prize (Rs. 5,500 in 3½ per cent. G. P. Notes and Rs. 1,700 in 6½ per cent. Bombay Development Loan) ...	7,200
XLIX.	The Kutchi Divan Bahadur Manibhai Prize	2,600
L.	The James Greaves Scholarship ...	4,600
LI.	The Colonel Patrick French Scholarship (Rs. 3,500 in 6 per cent. Bombay Municipal Bonds and Rs. 400 in 3½ per cent. Government Paper) ...	3,900
LII.	The Divan Bahadur Lakshman Jagannath Vaidya Scholarship ...	5,500
LIII.	The Vishvanath Narayan Mandlik Gold Medal (Rs. 9,600 in 3½ per cent. G. P. Notes and Rs. 2,500 in 6½ per cent. Bombay Development Loan) ...	12,100
LIV.	The Scholarship of the Medical Women for India Fund of 1883 ...	4,000
LV.	The Sir James Fergusson Scholarships ...	27,700
LVI.	The Lady Reay Silver Medal and Medical Scholarship ...	6,000
LVII.	The Jamshedji Nasarvanji Petit Scholarship (Rs. 5,000 in 4 per cent. Port Trust Paper and Rs. 5,200 in Government Bonds) ...	10,200
LVIII.	The Divan Bahadur Manibhai Cutch Memorial Scholarships ...	16,000
LIX.	The Sujna Gokulji Zala Vedanta Prize ...	16,500
LX.	The Mohobat Fellowship ...	37,200
LXI.	The Judge Spencer Prize ...	6,200
LXII.	The Bai Shirinbai Ratansha Parakh Scholarship (in 4 per cent. Port Trust Bonds) ...	6,000
LXIII.	The Vallabhdas Valji Scholarships ...	6,400
	Carried forward ...	5,97,100

		Rs.
	Brought over ... Rs.	5,97,100
LXIV.	The Pestonji Hormasji Cama Scholarship ...	32,900
LXV.	The Bai Hirabai P. H. Cama Gold Medal ...	5,700
LXVIII.	The R. M. Sayani Khoja Testimonial Scholarship ...	5,400
LXIX.	The Pandit Bhagvanlal Indraji Gold Medal and Prize [5 per cent. Municipal Bonds Rs. 6,000, 3½ per cent. Government Notes Rs. 2,600, 6½ per cent. Bombay Development Loan Rs. 1,500] ...	10,100
LXX.	The Muncherji Nowroji Banaji Scholarship ...	5,400
LXXI.	The Mrs. Satyavati Lalubhai Samaldas Scholarship ...	5,100
LXXII.	The Sir Dinshaw Maneckji Petit Medical Scholarship ...	6,700
LXXIII.	The Wordsworth Scholarship and Prize (Rs. 5,000 in Municipal Bonds, and Rs. 1,300 in 3½ per cent. Government Notes.) ...	6,300
LXXIV.	The Kashinath Trimbak Telang Gold Medal and Prize ...	7,000
LXXV.	The Dosabhai Framji Cama Scholarship (in 4 per cent. Port Trust Bonds Rs. 5,000 and 3½ per cent. Government Promissory Note Rs. 100) ...	5,100
LXXVI.	The Gangabai Bhat Scholarship (3½ per cent. Rs. 4,300 and 3 per cent. Rs. 600) ...	4,900
LXXVII.	The Bai Aimai Kharshetji Rustamji Cama Scholarship (in 4 per cent. Port Trust Bonds)	5,000
LXXVIII.	The Pherozeshah Merwanji Jijibhai Avesta and Pahlavi Scholarship ...	8,600
LXXIX.	The Bai Dayacore Morarbhoj Vijbhukhandas Scholarship ...	5,300
LXXX.	The Lord Sandhurst Scholarship (Rs. 6,200 at 3½ per cent. and Rs. 100 at 3 per cent.)...	6,300
LXXXI.	The Framji Sorabji Bhavanagri Scholarship	6,100
Carried forward Rs.		7,23,000

		Rs.
	Brought over ...	Rs. 7,23,000
LXXXII.	The Dr. T. Cooke Memorial Prize (Rs. 10,000 in 3½ per cent. G. P. Notes and Rs. 3,300 in 6½ per cent. Bombay Development Loan)	13,300
LXXXIII.	The Uttamram Memorial Scholarship ...	5,200
LXXXIV.	The Narayan Mahadev Parmanand Prize ...	7,000
LXXXV.	The Ebrahim Nurdin Scholarship ...	6,100
LXXXVI.	The Sir Mangaldas Nathubhoy Legal Scholarship (Rs. 15,500 in Municipal Debentures and Rs. 4,700 in 3½ per cent. Government Paper) ...	20,200
LXXXVII.	The Chatfield Scholarship and Prize ...	12,200
LXXXVIII.	The Rao Bahadur Karamsi Damji Scholarship ...	7,900
LXXXIX.	The J. C. Lisboa Gold Medal ...	6,000
XC.	The Abdulla Meheralli Dharamsi Khoja Testimonial Scholarship ...	7,100
XCI.	The Sir Mangaldas Nathubhai Scholarships...	4,33,900
XCII.	The Miss Yamunabai Atmaram Dalvi Scholarship ...	6,100
XCIII.	The Byramjee Nusserwanjee Koyajee Scholarship and Silver Medal ...	7,500
XCIV.	The Mrs. Gangubai R. V. Dhamnaskar Scholarship ...	6,500
XCV.	The Rao Bahadur Parvatishankar Manishankar Dave and the Nandashankar Parvatishankar Dave Scholarships (Rs. 5,500 in 6 per cent. Municipal Debentures and Rs. 1,000 in G. P. Notes) ...	6,500
XCVI.	The Sir Jamsetjee Jeejeebhoy (Third Baronet) Prize (Rs. 10,900 in 3½ per cent. Government Notes and Rs. 2,000 in 4 cent. Port Trust Bonds) ...	12,900
XCVII.	The Rajaram Govindram Scholarship ...	6,000
XCVIII.	The Sir Dinshaw Maneckjee Petit (First Baronet) Scholarship ...	6,500
XCIX.	The Sir Dinshaw Maneckjee Petit (First Baronet) Science Scholarship ...	14,400
	Carried forward Rs. ...	13,08,300

	Rs.
Brought over Rs. ...	13,08,300
C. The Nusserwanji Jehangirji Wadia Scholarship ...	6,000
CI. The Dr. Ismail Jan Mahomed Scholarship (in 3 per cent. Government Notes Rs. 400, and 3½ per cent. Government Notes Rs. 5,800) ...	6,200
CII. The Lord Sandhurst Gold Medal ...	6,100
CIII. The Noormahomed Jairazbhoy Peerbhoy Scholarship (Rs. 6,000 in 4 per cent. Improvement Trust Bonds and Rs. 500 in 3½ per cent. G. P. Notes) ...	6,500
CIV. The Ibrahimbhoy Rahimtulla Khoja Testimonial Scholarship (in 3 per cent. Government Notes Rs. 200 and 3½ per cent. Government Notes Rs. 8,400) ...	8,600
CV. The Dr. Tribhowandas Motichand Shah Scholarship (in 3 per cent. Government Notes Rs. 200 and 3½ per cent. Government Notes Rs. 8,400) ...	8,600
CVI. The Springer Research Scholarship ...	47,600
CVII. The Shivchand Amarchand Talakchand Jain Literature Scholarship (in 4 per cent. Port Trust Bonds) ...	10,000
CVIII. The Sir Lawrence Jenkins Scholarship ...	16,000
CIX. The Pralhad Sitaram Patwardhan Scholarship (Rs. 11,100 in 3 per cent. and Rs. 500 in 3½ per cent. Government Notes) ...	11,600
CX. The Gangadas Rangildas Scholarship (in 5 per cent. Municipal Bonds) ...	8,500
CXI. The Dr. F. G. Selby Memorial Scholarship (Rs. 4,500 in 4 per cent. Port Trust Bonds and Rs. 300 in 3½ per cent. Government Notes) ...	4,800
CXII. The Mungaldas Harivallabhdas Commerce Scholarships ...	17,000
CXIII. The Sir James Begbie Scholarships (Rs. 15,000 in 4 per cent. Improvement Trust Bonds and Rs. 500 in 3½ per cent. G. P. Notes) ...	15,500
CXIV. The Pragji Thackersey Moolji Science Scholarships (in 5 per cent. War Loan Securities)	10,000
Carried forward ... Rs.	14,91,300

			Rs.
	Brought over	... Rs.	14,91,300
CXV.	The Moos Medal ... ..	...	10,000
CXVI.	The George Pope Scholarship (in 5 per cent. Income Tax Free Loan and $3\frac{1}{2}$ per cent. Government Paper) ... ..	...	12,200
CXVII.	The Dinanath S. Mankar Gold Medal and the Miss Sokaribai S. Mankar Scholarship (in 6 per cent. Municipal Debentures) ... ..	...	9,000
CXVIII.	The Sardar Bhimrao Ramrao Akbarnawis Scholarships ... ..	...	94,400
CXIX.	The Dr. Dadabhai Naoroji Scholarship (in $6\frac{1}{2}$ per cent. Bombay Development Loan) ... ..	...	11,000
CXX.	The Sir William Wedderburn Memorial Scholarship (Rs. 11,800 in 6 per cent. Government Promissory Notes, Rs. 1,000 in $3\frac{1}{2}$ per cent. Government Promissory Notes)... ..	...	12,800
CXXI.	The Bai Jaiji Pallonji Lalkaka Scholarship (in 6 per cent. Government Promissory Notes) ... ..	...	10,500
CXXII.	The Prince of Wales Gold Medal and Hansraj Pragji Thackersey Prince of Wales Fellowship (Rs. 25,000 in 6 per cent. and Rs. 1,000 in $3\frac{1}{2}$ per cent. Government Promissory Notes) ... ..	...	26,000
CXXIII.	Edward Dalgado Scholarship ... ..	...	18,000
CXXIV.	The Sir Pherozshah M. Mehta Scholarship (Rs. 18,000 in 5 per cent. and Rs. 500 in $3\frac{1}{2}$ per cent. Government Promissory Notes)... ..	...	18,500
CXXV.	The Lord Minto Scholarship (Rs. 3,600 in 5 per cent. Government Loan and Rs. 6,500 in 4 per cent. Municipal Bonds) ... ..	...	10,100
CXXVI.	The Sir Currimbhoy Ibrahim and Bai Khanubai Scholarships ... ..	...	10,35,000
CXXVII.	The Sir Narayan G. Chandavarkar Hindu Law Scholarship (in 6 per cent. Municipal Debentures) ... ..	...	10,000
	Carried forward	... Rs.	27,68,800

		Rs.
	Brought over ...	Rs. 27,68,800
CXXVIII.	The Ratanji Ranchhodji Desai Research Fellowship (in 4 per cent. Port Trust Bonds); and the Ratanji Ranchhodji Desai Gold Medal (in 6 per cent. Bombay Municipal Bonds) ...	18,000
CXXIX.	The Sir Ibrahim Rahimtoola Commerce Scholarship ...	10,000
CXXX.	The Sohrab Khorshed Dastur Scholarship ...	10,000
CXXXI.	The Rao Bahadur Rajadhyaksha Gold Medal and Scholarship ...	15,000
CXXXII.	The Shridhar Ramkrishna Bhandarkar Prize...	10,000
CXXXIII.	The Edalji Dinshaw Scholarship (in 3½ per cent. G. P. Notes) ...	7,62,700
CXXXIV.	The Narhar Rowjee Beedker Scholarship and Prize (in 3½ per cent. G. P. Notes) ...	10,000
CXXXV.	Thakkar Vassonji Madhavji Lectureship	45,600
CXXXVI.	Dr. Mangaldas Mehta Research Scholarship and Gold medal (3½ per cent. G. P. Notes)	30,000
	Rajabai Tower Clock and Chimes ...	4,000
	Gibbs Fund ...	15,100
	Fawcett Collection of Books ...	2,300
	Thomas Ormiston Garden Fund ...	1,100
	Sir Charles Sargent Memorial Fund (for General Fund of the University) ...	8,900
	Rs. ...	<u>37,11,500</u>

CHAPTER XV.—RECOGNITION OF THE UNIVERSITY OF BOMBAY BY THE UNIVERSITIES OF OXFORD AND CAMBRIDGE.

1. The University of Bombay has been admitted by the University of Oxford, under the provisions of Statt. Tit. II., Sect. VIII, "Indian Universities," to the privileges of:—

A.—SENIOR STATUS, given to those who have obtained a First or Second Class Honours Degree (after pursuing

a course of study extending over three years at least) to be approved by the Hebdomadal Council. No list of these degrees is published. Each case is considered on receipt of full particulars ; so it is specially necessary that applications should be sent early, to give time for consideration.

B.—JUNIOR STATUS, given to those who have obtained a B.A. or B.Sc. degree (after pursuing a course of study extending over two years at least) provided that the candidate has passed (at Intermediate or Final) in English and two of the following languages, Latin, Greek, French, German, Sanskrit, Arabic, Persian, Pali, Classical Chinese, of which two either Latin or Greek or French or German shall be one. In practice Indian students cannot prove eligible for this exemption.

C.—EXEMPTION FROM RESPONSIONS, given to "Any person who has obtained the degree of B.A. or B.Sc. of this University provided that his course at the University included the study of English and one of the languages, Latin, Greek, French, German, Sanskrit, Arabic, Persian, Pali, Classical Chinese."

The language may have been offered at the Intermediate or Final Examination. It should, however, be noted that a degree which included Sanskrit or Arabic or Persian will not necessarily satisfy the conditions required for admission. In order to get through the First Public Examination at the end of his first year, the student will need at least French and many Colleges require evidence of some knowledge of it before admission.

[*Important.*—In order to get these exemptions it is necessary that applicants should not only have passed the examination for their degree, but have *obtained* the degree. Provisional certificates are not enough. Therefore candidates who leave India early should be warned to take steps to have the degree conferred in absence, and have the degree certificate sent in time to be produced in Oxford before matriculation.]

2. The University of Cambridge also has passed the following resolutions relating to the affiliation of the University of Bombay :—

(1) That the University of Bombay be adopted as an Institution affiliated to the University of Cambridge ;

(2) That any matriculated student of the University of Bombay shall be entitled to admission to the privileges of affiliation, provided that he submits certificates showing that he has attended classes, for a period of not less than three years, and that he produces either (a) evidence of graduation with First Class Honours ; or (b) evidence of graduation with Second Class Honours provided that he has passed, in one or more of the examinations by which he has qualified for his degree either in

English, two other languages, one of which is either Latin or Greek, and Mathematics ; or if the student is a native of Asia or Africa, and not of European descent, in English, in one of the following languages, Arabic, Persian with Arabic, Chinese, Sanskrit, or Pali, and in Mathematics. A pass in the corresponding part of the Previous Examination in any of these subjects will be accepted in lieu of the subject in the examination by which a student has qualified for his Degree, provided that the necessary part of the Previous Examination has been passed before the student matriculates.

A candidate who has obtained a First Class in the Intermediate Examination in Arts or Science, or a First or Second Class in the Examination for the Degree of Bachelor of Arts or Bachelor of Science, in this University is granted exemption from the whole of the Previous Examination, provided that, in some examination leading up to the Degree of Bachelor of Arts, or Bachelor of Science, he has passed (1) in Arabic, Persian, Persian with Arabic, Sanskrit, or Pali, (2) in Mathematics or Science, and (3) in English.

[N. B.—Only total exemption can be claimed.]

PART VII.—TEXT-BOOKS.

[*Note.*—Unless otherwise expressly stated, text-books in Languages are prescribed. Text-books in subjects other than Languages are recommended.

In the case of Examinations which are held half-yearly, the Text-books given under a particular year apply to both the Examinations to be held during the calendar year.]

BOOKS PRESCRIBED AND RECOMMENDED FOR THE EXAMINATIONS IN ARTS AND SCIENCE.

CHAPTER I.—ENGLISH.*

FOR THE MATRICULATION EXAMINATION.

1931

1. *For Detailed Study—*

"Selected Verse and Prose of the XVII to XX Centuries," edited by Dr. Edward Parker (Longmans).

2. *For General Reading—*

"A Tale of Two Cities", by Charles Dickens, abridged by C. H. Russell (Macmillan).

1932

1. *For Detailed Study—*

Some representative English Prose and Verse 1600-1930, selected and edited by R. C. Goffin (O. U. P.).

2. *For General Reading—*

(Will be announced later.)

FOR THE FIRST YEAR ARTS EXAMINATION.

1931

(a) Detailed Study.

Poetry—

1. The Golden Treasury of Songs and Lyrics, Book IV, ed. Palgrave, Poems CCVIII-CCLXXXIV (inclusive).
2. Longer Narrative Poems (nineteenth century), second series, ed. G. G. Loane, omitting Nos. 5 and 6 (Macmillan).

Prose—

3. Essays of Yesterday, ed. Treble and Vallins (Harrap).
4. Nine Modern Plays, selected by John Hampden (Nelson).

*In all cases in which the name of the publisher is given in the list of text-books prescribed in English for the various examinations in Arts, that publisher's edition is the edition prescribed for study and the book to be used as the text-book by the Examiners. When no edition of a book is mentioned it should be understood that the unabridged edition of the book is to be studied.

(b) General Reading.

5. Cambridge Readings in Literature, Book IV, ed. George Sampson (Camb. Univ. Press).
6. Richard Yea-and-Nay by Maurice Hewlett (Macmillan).

1932**(a) Detailed Study.****Poetry—**

1. The Golden Treasury, Bk. V, Poems CCCXL to CCCXCII, ed. Binyon (Macmillan).
2. Twenty-two Story Poems, *omitting* Nos. 1, 3, 6, 10 and 15, ed. E. E. Reynolds (Harrap).

Prose—

3. Jane Austen: Sense and Sensibility, abridged by Mrs. Boas (Macmillan).
4. Selections from the Plays of J. M. Barrie. (University of London Press).

(b) General Reading.

5. E. F. Knight: Where Three Empires Meet, abridged by J. C. Allen (Longmans).
6. Alpha of the Plough: Windfalls, pp. 1 to 128 (Dent and Sons).

1933**(a) For Detailed Study.****Poetry.—**

1. The Queen's Treasures Book of Verse, edited by G. J. Compton (G. Bell & Sons).
2. Mathew Arnold—Sohrab and Rustum (any edition).

Prose.—

3. W. M. Thackeray—The History of Pendennis (abridged) (Longmans Green & Co.).

(b) For General Reading

4. Modern Short Plays by various writers (University of London).
5. Selected English Essays, edited by G. G. Loane (King's Treasures) (J. M. Dent & Sons.).

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

[*N. B.*—Candidates for the Intermediate Examination in Arts are expected to have a general knowledge of English Literature in the 18th and 19th centuries as in Stopford Brooke's Primer of English Literature.]

1931**(a) Detailed Study.****Poetry—**

1. Shakespeare: The Merchant of Venice.
2. Boas: An Introduction to the Reading of Shakespeare (World's Manuals, Oxf. Univ. Press) to be read in conjunction with text No. 1.
3. A Book of English Poems, ed. Jagger, Pt. IV (Univ. of London Press).

Prose—

4. Selections from the Writings of Lord Macaulay, ed. Sir G. O. Trevelyan, pp. 1-117 and 203-252, *i.e.*, "Historical Scenes" and "Historical Sketches" (Longmans).
5. Thackeray : The English Humorists.

(b) General Reading.

6. Twentieth-Century Essays and Addresses, ed. W. A. J. Archbold, *omitting* Nos. 2, 8, and 10 (Longmans).
7. Dickens : The Pickwick Papers.

1932**(a) Detailed Study.****Poetry—**

1. A Book of Victorian Verse, ed. V. H. Collins (Oxford University Press).
2. Milton : Paradise Lost, Bk. II.

Prose—

3. Some Roundabout Papers, *except* Nos. 10 to 13, ed. R. C. Goffin (Milford).
4. Burke : Thoughts on the Cause of the Present Discontents.

(b) General Reading.

5. Richard Jefferies : The Story of my Heart, ed. Speight (Longmans).
6. Short Stories of Yesterday, selected by F. H. Pritchard (Harrap).

1933**(a) Detailed Study.****Poetry.—**

1. Milton.—Comus.
2. A Treasury of Verse, ed. Edgar & Chilman, Part II (Harrap).

Prose.—

3. Kinglake—Eothen.
4. From Goldsmith to Landor, ed. V. H. Collins (Oxford University Press).

(b) General Reading.

5. Sheridan : The School for Scandal and The Rivals.
6. Modern Short Stories, ed. Buchan (Nelson).

FOR THE B.A. EXAMINATION.**1931****(a) Compulsory.****Course I—**

1. Shakespeare—Macbeth (1929-30).
2. Shakespeare—Julius Cæsar (1930-31).

Course II—

1. Browning—"Men and Women," edited by Hadow (O. U. P.) (1929-30),
2. Carlyle—Sartor Resartus (1930-31).

Course III—

1. Barrie—"The Admirable Crichton" (Hodder and Stoughton) (1929-30).
Bennett and Knoblock—"Milestones" (Methuen) (1929-30).
Bennett—"The Great Adventure" (Methuen) (1929-30).
2. Golden Treasury of Modern Lyrics, Book II—Edited by Binyon, with notes by J. H. Fowler (Macmillan) (1929-30).
3. Five Essays by Dean Inge, ed. E. A. Wodehouse (Longmans) (1930-31).
4. Joseph Conrad : Victory (Methuen) (1930-31).

(b) Voluntary Pass.*Course IV—*

- (a) Principles of Literary Criticism.
- (b) Special Study of two Literary Forms :—

1. To be studied in 1929-30 :

The Epic, illustrated by—

- (i) Spenser : Færie Queene, Book I.
- (ii) Milton : Paradise Lost, Books I-II.
- (iii) Keats : Hyperion (Earlier form).
- (iv) Tennyson : Morte d'Arthur.

2. To be studied in 1930-31 :

" Literary Criticism as a form of literature," illustrated by—

" English Critical Essays (XVI-XVIII centuries) " and " English Critical Essays (XIX century)," being Nos. 240 and 206 of The World's Classics (Oxf. Univ. Press).

(c) Voluntary Honours.*Course V—Period 1650-1750—*

- (a) To be studied in 1929-30 :
The Period 1650-1700.
- (b) To be studied in 1930-31 :
The Period 1700-1750.

Course VI—

A study of the following representative writers :—

1. A volume of Restoration Plays from Dryden to Farquhar (Everyman's Library, Dent).
2. { Dryden : Essay of Dramatic Poesy.
Dryden : Poetry and Prose, Edited by Nichol Smith (Clarendon Press).
3. The English Poets, ed. T. H. Ward, Vol. III, pp. 1-182 (Macmillan).
4. Selections from Swift, by W. T. Williams and G. H. Vallins (Methuen).

Also, the following two authors with particular social reference :—

1. Everybody's Pepys, Edited by Morshead (Bell & Sons).
2. Fielding : Tom Jones.

Course VII—

Chaucer—The Prologue (general) and The Nonne Preestes Tale (detailed).

1932

(a) Compulsory.

Course I—

1. Shakespeare—Julius Cæsar (1930-31).
2. Shakespeare—Hamlet (1931-32).

Course II—

1. Carlyle : Sartor Resartus (1930-31).
2. Selections from Swinburne, ed. H. M. Burton (C. U. P.) (1931-32).

Course III—

1. Five Essays by Dean Inge, ed. E. A. Wodehouse (Longmans) (1930-31).
2. Joseph Conrad : Victory (Methuen) (1930-31).
3. Shaw : Saint Joan (Constable) (1931-32).
4. Chosen Poems of Thomas Hardy (Macmillan) (1931-32).

(b) Voluntary Pass.

Course IV—

- (a) Principles of Literary Criticism.
- (b) Special study of two Literary Forms :—

1. To be studied in 1930-31 :

Literary Criticism as a form of literature, illustrated by "English Critical Essays (XVI—XVIII centuries)" and "English Critical Essays (XIX century)," being Nos. 240 and 206 of the World's Classics (Oxford University Press).

2. To be studied in 1931-32 :

The Lyric, illustrated by—

The Oxford Book of English Verse, chosen and ed. by Quiller Couch (Oxford).

(c) Honours.

Course V—

The History of English Literature, 1700-1800.

- (a) To be studied in 1930-31 :

The Period 1700-1750.

- (b) To be studied in 1931-32 :

The Period 1750-1800.

Course VI—

A study of the following representative writers of the period :—

1. The English Poets, ed. T. H. Ward, Vol. III, pp. 1-182 (Macmillan) (1930-31).
2. Selections from Swift, by Williams and Vallins (Methuen) (1930-31).
3. The English Poets, ed. T. H. Ward, Vol. III, the selections from Johnson, Collins, Gray, Chatterton, Cowper, Burns, Crabbe and Blake (Macmillan) (1931-32).
4. Johnson : Life of Pope (1931-32).

Also, the following two authors with particular social reference :—

1. Fielding : Tom Jones (1930-31).
2. Dr. Johnson's Table Talk, ed. Lewis Bettany (Blackie) (1931-32).

Course VII—

Chaucer : The Prologue (general) and the Squire's Tale (detailed) (1931-32).

1933

(a) Compulsory**Course I.—**

1. Shakespeare—Hamlet (1931-32).
2. Shakespeare—Henry IV, Pt. I (1932-33).

Course II.—

1. Selections from Swinburne, ed. H. M. Burton (C. U. P.) (1931-32).
2. Newman : The Idea of a University, Discourses V-VII and University subjects II (Literary) (Longmans).

Course III.—

1. Shaw : Saint Joan (Constable) (1931-32).
2. Chosen Poems of Thomas Hardy (Macmillan) (1931-32).
3. Galsworthy : The Man of Property.
4. More Essays of To-day, selected by F. H. Pritchard (Harrap).

(b) Voluntary Pass.**Course IV.—**

- (a) Principles of Literary Criticism.
- (b) Special study of two Literary Forms :—

1. To be studied in 1931-32 :

The Lyric, illustrated by—

The Oxford Book of English Verse, chosen and edited by Quiller Couch (Oxford).

2. To be studied in 1932-33 :

Prose Satire, illustrated by—

1. Selections from Swift, ed. Williams & Vallins (Methuen).
2. Peacock : Nightmare Abbey.
3. Butler : Erewhon.

(c) Honours.**Course V—**

The History of English Literature, 1750-1850.

- (a) To be studied in 1931-32 :

The Period 1750-1800.

- (b) To be studied in 1932-33 :

The Period 1800-1850.

Course VI—

A study of the following representative writers of the period :—

1. The English Poets, ed. T. H. Ward, Vol. III. the selections from Johnson, Collins, Gray, Chatterton, Cowper, Burns, Crabbe and Blake (Macmillan) (1931-32).
2. Johnson : Life of Pope (1931-32).

3. The English Poets, edited T. H. Ward, Vol. IV, the selections from Wordsworth, Coleridge, Southey, Scott, Campbell, Byron, Moore, Shelley, Keats and Landor (Macmillan) (1932-33).

4. Coleridge a Literary Criticism, introduced by J. W. Mackail (Milford) (1932-33).

Also the following two authors with particular social reference :—

1. Dr. Johnson's Table Talk, ed. Lewis Bettany (Blackie) (1931-32).

2. W. M. Thackeray : Vanity Fair (1932-33).

Course VII—

Chaucer : The Prologue (general) and the Knight's Tale.

FOR THE M. A. EXAMINATION.*

1931

Course I—

Paper I—

1. Wyatt : An Anglo-Saxon Reader, Nos. 4, 22, 23, 24, 25, 28 and 29 (Camb. Univ. Press).
2. The Pearl, ed. C. G. Osgood (D. C. Heath & Co., Belles Letters Series).
3. Ancren Riwe, Passages to be found in Selections from Early Middle English, Part I, edited by Joseph Hall, pp. 54-75, both inclusive (O. U. P.)

Recommended for study—

1. R. W. Chambers : England before the Norman Conquest (Longmans).
2. J. Jusserand : A literary History of the English People, Vol. I (T. Fisher Unwin).
3. Pendrill : London Life in the 14th Century (G. Allen and Unwin).

Course II—

Paper II—

1. Shakespeare—Romeo and Juliet, All's Well that Ends Well, Othello, Antony and Cleopatra, The Tempest.

Paper III—

1. Shakespeare : Works.
2. J. Dover Wilson : Life in Shakespeare's England (C. U. P.).
3. Creizenach : The English Drama in the Age of Shakespeare (Sidgwick and Jackson).

Recommended for study—

1. C. H. Herford : Recent Shakespearean Investigation, 1893-1923 (Blackie).
2. Sir E. K. Chambers ; Shakespeare : A Survey (Sidgwick and Jackson).
3. A. H. Thorndike : Shakespeare's Theatre (Macmillan).

Course III—

Paper IV—The History of English Literature, 1600-1700, with the particular study of :—

Paper V—
 { 1929-1930 : Bacon, Sir Thomas Browne, Seventeenth Century English Verse (G. T. S. Macmillan).
 { 1930-1931 : Milton (all works after 1650), Dryden, Congreve (Mermaid Series).

* Candidates taking English as the Principal Language will be required to answer all six papers. Those who take English as subordinate to another Language will be required to answer Papers II and VI only.

Course IV—**Paper VI—****The Novel.**

The following books are recommended for study :—

Defoe : Captain Singleton (World's Classics).

Richardson : Pamela (Everyman's Library, Nos. 683 and 684).

Fielding : Joseph Andrews (Everyman's Library, No. 467).

Sterne : Tristram Shandy (Everyman's Library, No. 617).

Jane Austen : Emma.

Scott : Waverley.

Dickens : Martin Chuzzlewit.

Thackeray : The Newcomes.

Meredith : The Ordeal of Richard Feverel (Constable).

Butler : The Way of All Flesh (Travellers' Library, Cape).

Galsworthy : The Forsyte Saga (Heinemann).

1932**Course I—****Paper I—**

1. Sedgefield : An Anglo-Saxon Book of Verse and Prose, Nos. 16 (The Battle of Haldon) and 25 (The A. S. Chronicle, Wessex and the Danes) (Manchester University Press).
2. Langland : Piers Plowman, Prologue and Paesus I-VII, ed. Skeat (Clarendon Press).

Recommended for study :—

1. R. W. Chambers : England before the Norman Conquest (Longmans).
2. J. Jusserand : A Literary History of the English People, Vol. I (T. Fisher Unwin).
3. D. Chadwick : Social Life in the days of Piers Plowman (C. U. P.)

Course II—**Paper II—**

1. Shakespeare : The Two Gentlemen of Verona, Measure for Measure, Othello, Antony and Cleopatra, Henry VIII.

Paper III—

1. Shakespeare : Works.
2. J. Dover Wilson : Life in Shakespeare's England (C. U. P.)
3. Creizenach : The English Drama in the Age of Shakespeare (Sidgwick and Jackson).

Recommended for study :

1. C. H. Herford : Recent Shakespearean Investigation (Blackie).
2. Sir E. K. Chambers : Shakespeare : A Survey (Sidgwick and Jackson).
3. A. H. Thorndike : Shakespeare's Theatre (Macmillan).

Course III—

Paper IV—The History of English Literature, 1700-1800.

Paper V—

Addison, Pope, Swift, Johnson, Burke, Cowper.

Course IV—

Paper VI—

Comedy.

The following works are recommended for study :—

Aristophanes : The Frogs, trans. Gilbert Murray (George Allen and Unwin)
or trans. Frere (Oxford Pocket Poets).

Plautus : Miles Gloriosus (Loob Library, Heinemann).

Molière : The Misanthrope (Bell's Modern Translations).

Shakespeare : The Comedy of Errors, Twelfth Night.

Ben Jonson : The Alchemist.

Congreve : The Way of the World.

Sheridan : The School for Scandal.

Wilde : The Importance of Being Earnest.

Shaw : Man and Superman.

1933*Course I—*

Paper I—

1. [Will be announced later.]

2. Chaucer : Legend of Good Women (including both versions of its prologue).

Recommended for study :—

1. R. W. Chambers : England before the Norman Conquest (Longmans).

2. J. Jusserand : A Literary History of the English People, Vol. I (T. Fisher Unwin).

Course II—

Paper II—

Shakespeare : The Two Gentlemen of Verona, Measure for Measure, Coriolanus, Lear, Henry VIII.

Paper III—

Shakespeare : Works.

J. Dover Wilson : Life in Shakespeare's England (C. U. P.).

Creizenach : The English Drama in the Age of Shakespeare (Sidgwick and Jackson).

Recommended for Study :

1. C. H. Herford : Recent Shakespearean Investigation (Blackie).

2. Sir E. K. Chambers : Shakespeare—A Survey (Sidgwick and Jackson).

3. A. H. Thorndike : Shakespeare's Theatre (Macmillan).

Course III—

Paper IV—

The History of English Literature, 1750-1850.

Paper V—

The particular study of—

1931-32 : Johnson, Burke, Cowper.

1932-33: Wordsworth, Scott, Byron.

Course IV—

Paper VI—

History.

The following works are recommended for study :—

1. Herodotus, Book VII (Polymnia), Everyman's Library, Dent.
2. Thucydides, Book II Do. Do.
3. Tacitus, Agricola Do. Do.
4. Clarendon, War Pictures from the History, Selected by R. F. Mackenzie (O. U. P.).
5. Gibbon, Decline and Fall of the Roman Empire, selections by Rawlinson and Dunlop. (Longmans).
6. Macaulay, Selections from the writings of Lord Macaulay by Sir M. Trevelyan, pp. 1-309.
7. Carlyle, "The French Revolution, Vol. III, The Guillotine."
8. Froude, Selections from the writings of J. A. Froude by P. S. Allen, pp. 1-285 (Longmans).
9. J. R. Green, Short History of the English people, Chapters IX & X (The Revolution and Modern England) (Macmillan).
10. Lytton Strachey, Queen Victoria—Phoenix Library (Chatto and Windus).

CHAPTER II.—LATIN.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Ovid.—Fasti IV.
2. Sallust.—Bellum Catilinæ.

1932

1. Ovid.—Metamorphoses I.
2. Cicero.—In Verrem, De Signes.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Virgil—Æneid V and VI.
2. Livy.—Book V.

1932

1. Virgil.—Æneid VII and VIII.
2. Livy.—Book XXI.

FOR THE B. A. EXAMINATION.

1931

Pass Course.

1. Horace.—Satires, Bk. I, 1, 6, 9 ; Bk. II, 1, 3, 5, 6, 7.
2. Cicero.—Philippics II.
3. Horace.—Odes I and II.
4. Pliny.—Letters, Books III and IV.

Additional for Honours Course.

1. Cicero.—Selected Letters (Ed. Watson).
2. Plautus.—Aularia.
3. Seneca.—Dialogues X and XI.
4. Tacitus.—Historiæ 1.
5. Ovid.—Tristia, Book III.
6. Virgil.—Eclogues.

Additional Two Papers of Pass Standard.

*(To be taken by such candidates as offer all the seven papers
in Latin for the Honours Examination.)*

1. Virgil.—Selections from Georgics (C. U. P.)
2. Cicero.—De Amicitia.

1932

Pass Course.

1. Horace.—Odes I and II.
2. Pliny.—Letters, Bks. III and IV.
3. Horace.—Epistles, Bk. I, 1-14.
4. Cicero.—Pro Roscio.

Additional for Honours Course.

1. As in 1931.
2. Do.
3. Do.
4. Tacitus.—Annals, Bk. IV.

5. Catullus.—*Carmina Selecta* (O. U. P.)
6. Ovid.—*Tristia*, Bk. I.

Additional Two Papers of Pass Standard.

(*To be taken by such candidates as offer all the seven papers in Latin for the Honours Examination.*)

1. Virgil.—*Selections from Georgics* (C. U. P.)
2. Cicero.—*De Senectute*.

FOR THE M. A. EXAMINATION.

[N. B.—A standard History of Latin Literature, Sandy, *A Companion to Latin Studies*, Ramsay, *Roman Antiquities*, Becker, *Gallus*, are recommended for reference.]

1931 and 1932

Paper I—

Unseens for translation and Prose Composition.

1931

Paper II—

1. Plautus.—*Captivi* (Ed. Lindsay).
2. Lucretius.—Book I (Ed. Duff).
3. Tacitus.—*Agricola and Germania* (Ed. Sleeman).
4. Cicero.—*de Natura Decorum* (Ed. J. B. Mayor).

To be studied in connection with these Texts :—

Masson, *Lucretius, Epicurean and Poet*; Dill, *Roman Society from Nero to Marcus Aurelius*; Mackail, *History of Latin Literature*; Tyrrell, *Lectures on Roman Poetry*; Warde Fowler, *Roman Ideas of Deity*. Crutwell, *History of Latin Literature*, is recommended for reference.

1932

Paper II—

1. Juvenal.—*Satires*, Books I-III (Ed. J. B. Mayor).
2. As in 1931.
3. Do.
4. Pliny.—*Correspondence with Trajan* (Ed. Hardy).

To be studied in connection with these Texts :—

The same as for 1931, except Masson, *Lucretius, Epicurean and Poet*.

1931 and 1932

Paper III—

Quintilian—*Institutions Oratoriæ Liber X.* (Peterson large ed.)

To be studied in connection with this Text :—

Nettleship, *Lectures and Essays: Literary Criticism in Latin Antiquity*; Wilkins, *Roman Education*.

1931

Paper IV—

Martial (Ed. Stephenson).

Cicero.—Pro Cluentio.

To be consulted :—Warde Fowler, *Social Life in Rome in the Age of Cicero* ; Dill, *Roman Society from Nero to Marcus Aurelius* ; Forsyth, *Life of M. T. Cicero*.

1932

Paper IV—

Ovid.—Fasti, III.

Cicero.—Pro Milone.

To be consulted :—Warde Fowler, *Religious Experience of Roman People* ; *Roman Festivals of the Republic* ; *Social Life in Rome in the Age of Cicero* ; Forsyth, *Life of M. T. Cicero*.

1931 and 1932

Paper V.—

Roman Lyrics : 1. Virgil *Bucolics* (Ed. Sidgwick).

2. Catullus.

3. Tibullus } (Ed. Ellis.)
4. Propertius }

To be consulted : Sellar, *Roman Poets of the Republic* ; Sellar, *Roman Poets of the Augustan Age* ; Butler, *Post-Augustan Poetry*. For Reference :—Crutwell, *Latin Literature*.

1931 and 1932

Paper VI—

Cicero's Rhetorical works.

Books to be consulted : See under Paper III, and Forsyth *Life of M. T. Cicero*.

1931

De Oratore, Libri III (Ed. Wilkins.)

1932

Brutus Orator (Ed. Wilkins).

CHAPTER III.—GREEK.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Xenophon.—*Anabasis*, Book V.

2. Homer.—*Odyssey*, Book XI.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Herodotus.—Books I and II.
2. Euripides.—Alcestis.

FOR THE B. A. Pass EXAMINATION.

1931

1. Sophocles.—Œdipus Tyrannus.
2. Aristophanes.—The Frogs.
3. Demosthenes.—Olynthiacs I, II and III.
4. Plato.—Protagoras.

CHAPTER IV.—HEBREW.

[N.B.—The following books of general reference may be consulted with advantage in connection with the text-books in Hebrew prescribed for the various examinations for the years 1931 and 1932.]

Dictionaries—

1. Dictionary of the Bible, edited by Dr. Hastings : Edinburgh.
2. Jewish Encyclopædia : New York and London.
3. Gesenius' Hebrew-English Lexicon, edited by Brown, Driver and Briggs : Clarendon Press.
4. A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature by Dr. Marcus Jastrow. New York and Berlin : Verlag Choreb.
5. Anglo-Hebrew Modern Dictionary by the Rev. I. Raffalovitch, London.

Grammars—

1. Gesenius—Kautzch : Hebrew Grammar, English Translation : Clarendon Press.
2. A treatise on the use of the Tenses in Hebrew by Canon Driver : Clarendon Press.
3. A Criticism of System of Hebrew Metre by W. H. Cobb : Clarendon Press.
4. An Aramaic Method by Charles R. Brown : Chicago.

Literature—

1. An Introduction to the Literature of the Old Testament by Canon Driver : Edinburgh.
2. A short History of Jewish Literature by Dr. Israel Abrahams : London.
3. Introduction to the Talmud by D. M. Mielziner (Third edition) : New York.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

I—Samuel and Psalms, Book IV—**Hebrew Poems†—*

1. Shahar abakueshkha.

* Consult :—The series of the Cambridge Bible for Schools and Colleges, Cambridge.

† Selected from the Jewish Daily Prayers (Sephardic Ritual, Livorno Leghorn, Italy).

2. Yom ze M'khubbad.
3. D'ror yiqra.
4. Mah-llekha yicri.

1932

II—*Samuel and Psalms, Book III**—

Hebrew Poems †—

1. Yigdal Elohim.
2. Adon' olam.
3. Ki-eshmera Shabbath.
4. Lekha dodi.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

- ‡1. Genesis (Chaps. XXV—L).
- ‡2. Micah.
3. Poems of Rabbi Solomon Ibn Gabirol 1 to 13.

1932

- ‡1. Exodus (Chaps. I—XXIV, and XXX—XXXIV).
- ‡2. Jonah and Nahum.
3. Poems of Rabbi Solomon Ibn Gabirol 14 to 20.

FOR THE B. A. EXAMINATION.

1931

Pass Course.

(Two Papers.)

- (1) and (2) I—Isaiah (XL—LXVI).
- (1) and (3) II—Daniel.
- (4) III—Mishnah—*Abot*h.

IV—Rabbi Jehudah Hallevi's "*Shabbath Zachor*", i.e., the poem *Mi-Khamokha* (Sephardic Daily Ritual, Leghorn).

Additional for Honours Course.

(Three Papers.)

I—Genesis I—X with Rashi's Commentary.

II—Targum Onkelos to Genesis I—X.

III—Rabbi Solomon Ibn Gabirol's poem—*Azharoth* (Affirmative precepts) with the introductory poem by Rabbi David ben Elazar Bakoda (Sephardic Festival Ritual, Leghorn).

IV—Unprepared passages for translation into English and *vice versa*.

* Consult :—The series of the Cambridge Bible for Schools and Colleges, Cambridge.

† Selected from the Jewish Daily Prayers (Sephardic Ritual, Livorno Leghorn, Italy).

‡ Selected from the Hebrew Daily Prayers (Sephardic Ritual, Livorno, Leghorn, Italy).

Additional Two Papers of Pass Standard.

(Two Papers.)

(To be taken by such candidates as offer all the *seven* papers in Hebrew for the **Honours** Examination.)

(1) and (3) I—Zechariah.

(1) and (3) II—Esther.

III—Ibn Gabirol's "*Reshut to Nishmat*," being poem No. 43 in Brody and Albrecht's "*The New School of Poets*" (Williams and Norgate, London.)**1932****Pass Course.**

(Two Papers.)

(1) I—Mishnah—*Aboth*.II—Rabbi Jehudah Hallevi's "*Shabbath Zachor*", i. e., the poem *Mi-Khamokha* (Sephardic Daily Ritual, Leghorn).

(2) and (3) III—Jeremiah (I—XXV).

(2) and (4) IV—Ezra.

Additional for Honours Course.

(Three Papers.)

I—Genesis I—X, with Rashi's commentary.

II—Targum Onkelos to Genesis I—X.

(5) III—Devotional Poems of Rabbi Jehudah Hallevi 43-62.

IV—Unprepared passages for translation into English and *vice versa*.**Additional Two Papers of Pass Standard.**

(Two Papers.)

(To be taken by such candidates only as offer all the *seven* papers in Hebrew for the **Honours** Examination.)

(2) and (4) I—Ecclesiastes.

(2) and (4) II—Esther.

III.—Ibn Gabirol's "*Reshut to Nishmat*," being poem No. 43 in Brody and Albrecht's "*The New School of Poets*" (Williams and Norgate, London.)

FOR THE M. A. EXAMINATION.**1931****Subordinate.**

Paper I.—

Unseen passages for translation and composition.

Paper II.—

(a) Brody and Albrecht—"The New Hebrew School of Poets," 1906. (Williams and Norgate, London.) Selections 149, 151, 152, 153, 157, 158, 159 and 160. (Poet-Jehuda-al-Harizi).

(b) Halper's Post-Biblical Literature, "An Anthology," 1920. [The Jewish Publication Society of America, Philadelphia]. Selections XXI—XXVI.

(c) History of the Jewish Literature represented by the above texts.

Consult : Graetz : History of the Jews, English Translation, Nutt : London.

Additional for Principal.

Paper III.—

An account of the origin and growth of the Hebrew language, its linguistic character, and its relation to the Western Aramaic and Neo-Hebraic (Mishnaic) languages.

Consult :

1. Gesenius—Kautzch : Hebrew Grammar, English Translation ; Clarendon Press.
2. Wright : "Comparative grammar of the Semitic languages, 1890" : Cambridge University Press.
3. Segal : Mishnaic Hebrew and its relation to Biblical Hebrew and Aramaic : Clarendon Press.
4. W. B. Stevenson : Grammar of the Palestinian Jewish Aramaic : Clarendon Press.

Paper IV.—

The political, social and religious life of the "Jews in Spain" in 1037—1492.

Consult :

1. Graetz : History of the Jews, English Translation, Nutt : London.
2. G. F. Abbott : Israel in Europe 1907, Macmillan, London.

Paper V.—

Isaiah, I.—XXXIX (including points of scholarship and criticism).

Consult :—

The Commentaries of Delitzsch, Cheyne, Box, Skinner, and Gray (in the series of the International Critical Commentary, T. and T. Clarke, Edinburgh) ; also Driver's "Isaiah, his Life and Times".

Paper VI.—

(a) *Deuteronomy*, I to XVII. With Targum Onkelos and Rashi's Commentary.

Consult :—

1. Life of Rashi by Maurice Liber. (The Jewish Publication Society of America, Philadelphia.)
2. Driver : "Deuteronomy", International Critical Commentary (T. and T. Clarke, Edinburgh).

(b) *Mishnah* : Yoma I—IV.

Consult :—

1. The Commentaries of Bartenora and Tosafoth Yom Tob.
2. Jastrow : A Dictionary of the Targumim, the Talmudim and the Midrashic Literature : New York.
3. Mielziner : Introduction to the Talmud, 3rd edition 1925 : New York.

1932

Subordinate.

Paper I.—Unseen passages for translation and composition.

Paper II.—

- (a) Brody and Albrecht : "The New Hebrew School of Poets", 1906. (Williams and Norgate : London). Selections 122—134. (Poet Abraham Ibn Ezra).
- (b) Halper's Post-Biblical Literature, "An Anthology", 1920. [The Jewish Publication Society of America : Philadelphia.] Selections : XXI--XXVI.
- (c) History of the Jewish Literature represented by the above texts.

Consult :

Graetz : History of the Jews, English Translation. Nutt : London.

Additional for Principal.

Paper III.—

An account of the origin and growth of the Hebrew language, its linguistic character, and its relation to the Western Aramaic and Neo-Hebraic (Mishnaic) languages.

Consult :

- (1) Gesenius—Kautzch : Hebrew Grammar, English Translation : Clarendon Press.
- (2) Wright : "Comparative grammar of the Semitic languages, 1890": Cambridge University Press.
- (3) Segal : Mishnaic Hebrew and its relation to Biblical Hebrew and Aramaic : Clarendon Press.
- (4) W. B. Stevenson : Grammar of the Palestinian Jewish Aramaic : Clarendon Press.

Paper IV.—

The political, social and religious life of the "Jews in Spain" in 1037—1492.

Consult :

- 1. Graetz : History of the Jews, English Translation, Nutt : London.
- 2. G. F. Abbott : Israel in Europe, 1907, Macmillan : London.

Paper V.—

Job (including points of scholarship and criticism).

Consult :

- Driver and Gray : Commentary on *Job* (in the series of the International Critical Commentary). T. and T. Clarke : Edinburgh.

Paper VI.—

- (a) *Deuteronomy* XVIII to XXXIV. With Targum Onkelos and Rashi's Commentary.

Consult :

- (1) Life of Rashi by Maurice Liber. (Jewish Publication Society of America : Philadelphia).
- (2) Driver : *Deuteronomy*. International Critical Commentary, T. and T. Clarke : Edinburgh.

(b) Mishnah "*Sukkah*".

Consult :

- (1) The commentaries of Bartenora and Tosafoth Yom Tob.
- (2) Jastrow : A Dictionary of the Targumim, the Talmudim and the Midrashic Literature.
- (3) Mielziner : Introduction to the Talmud : 3rd edition, 1925 : New York.

CHAPTER V.—PERSIAN.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Kashefi.—*Akhlaq-e-Mohsini*, first-half.
2. Saadi.—*Tayyibat*, odes 76-150.

1932

1. Jami—*Baharistan*, omitting *Rauzas* 5 and 6.
2. Saadi—*Tayyebat*, Odes 151-225.

1933

1. Kashefi—*Akhlaq-e-Mohsini*, (Chapters 1-31, inclusive.)
2. Saadi—*Tayyebat*, Odes 1-75.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Nasrullah.—*Kalila wa Dimna*, pp. 34-111. (Pers. edition) *i. e.*, from 'Bab-e-ibtida-e-Kalila wa Dimna' to the end of 'Bab-ul-Asad was Saur.'
2. Hafiz.—*Diwan*, first 55 odes of *Radif-a-yà*, omitting Arabic lines.
3. Saadi.—*Qasaed*, pp. 49-82 (Kirmani's edition, Naseri Press, Bombay, 1898) *i. e.*, to the end of the qasida beginning with 'Ay nafs agar ba deeda-e-tahqeeq bingari'. The *Qasaed* prescribed for 1931 are Nos. 25-39, in either the Naseri, the Navalkishore or the Shirazi edition.

1932

1. Kashefi—*Anwar-e-Suhaili*, Ch. I.
2. Hafiz—*Diwan*, Odes 1-75 of *Radif-e-Dal*.

1933

1. Kashefi—*Anwar-e-Suhaili*, Chapters II and III.
2. Hafiz—*Diwan*, Odes 1-75.

FOR THE B. A. EXAMINATION

1931

Pass Course.

1. Ahmad.—*Merajus Saadat*, pp. 10-76. Bombay edition ; Muzaffari Press, 1325 A. H.
2. Nizami.—*Haft Paikar* (*Bahramnama*), pp. 2-60 of the *Khamsa*, Bombay edition, Muzaffari Press, 1328 A. H.

3. Dawalatshah.—Tazkira, Tabaqat III and IV.
4. Firdausi.—Shahnama, from Gila-e- Firdausi, before the commencement of the Section dealing with the Ashkanians, to the beginning of 'Nishastan-e-Bahram (*i. e.* Bahram Gor) bar takht wa andarz kardan.'

Additional for Honours Course

1. Qaani.—Qasaed; selections ; see Appendix No. 1 (page. XXI).
2. Saduddin Warawini.—Marzubannama, from the beginning of the book to the end of Chapter V (Gibb Memorial Series) ;
or
Abul Fazl—Insha or Letters, Daftar I.
3. Rumi.—Masnawi, Daftar II, first half.
4. Khondmir.—Habibus Siyar, life of the Prophet, pp. 8-59, *i.e.*, upto the end of the seventh year of the Hijra ; Bombay edition ;
or
Ferishta—Tarikh-e-Ferishta, Maqala XII ; " darhalat-e-Mashayekh-e-Hindostan."

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Persian for the **Honours** Examination).

1. Ali Muhammad Khan—Mirat-e-Ahmadi, part I, pp. 105-235 ; ed. by Professor Nawab Ali (Gaekwad's Oriental Series.)
2. Sayyed Husaini—Nuzhat-ul-Arwah, pp. 1-106, Lahore edition.
3. Zahir Faryabi—Qasaed, pp. 2—100 ; Naval Kishore edition.
4. Amir Khusraw—Dewalrani Khizarkhan, pp. 1-151 ; Aligarh Institute.

1932

Pass Course.

1. Dawlatshah— Tazkiratush Shuara , as in 1931.
2. Firdausi—Shahnama, as in 1931.
3. Mirza Hairat—Tarikh-e-Iran, ch. V, VI and VII.
4. Nizami—Khusraw wa Shirin, from the beginning up to 'Ba padshahi nishastan-e-Shirin,' pp. 48 to 104, Muzaffari Press, Bombay.

Additional for Honours Course.

1. Rumi-Masnawi, as in 1931.
2. Khondmir-Habib us Siyar, as in 1931 ;
or
Ferishta—Tarikh-e-Ferishta, as in 1931.
3. Mirza Mahdikhan—Jahangusha-e-Nadiri, pp. 1-200, Fathul-Karim ed. Bombay.
4. Minuchehri— Qasaed, pp. 1-81, Persian edition.

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Persian for the **Honours** Examination).

1. Ali Muhammad Khan—Mirat-e-Ahmadi, as in 1931.

2. Amir Khusraw—Dewalrani Khizarkhan, as in 1931.
3. Kashefi—Rawzatush Shuhada, pp. 2-89 ; Naval Kishore edition, Lahore, 1331 A. H.
4. Jami—Salaman wa Absal, complete.

1933

Pass Course

1. Mirza Hairat—Tarikh-e-Iran, as in 1932.
2. Nizami—Khusraw wa Shirin, as in 1932.
3. Ghazzali—Kimiya-e-Saadat, from the commencement of the book to the end of Asl. II.
4. Firdausi—Shahnama, from the coronation of Qobad to the beginning of the 'Dastan-e-Razm-e-Khaqan'.

Additional for Honours Course

1. Mirza Mahdikhan—T. Jahangusha-e-Nadri, as in 1932.
2. Minuchehri—Qasaed, as in 1932.
3. Rumi—Masnawi, Daftar III, first half.
4. Mirkhond—Rawzat-us-Safa, from the reign of Bahman to the end of the Sasanian dynasty.

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Persian for the **Honours** Examination.)

1. Kashefi—Rawzatush Shuhada, as in 1932.
2. Jami—Salaman wa Absal, as in 1932.
3. Sayyed Husaini—Nuzhat-ul-Arwah, as in 1931.
4. Zahir Faryabi—Qasaed, as in 1931.

APPENDIX No. 1.

The Qasidas of Qaani, prescribed for the B.A. (Honours) Examination of 1931 are those which begin with the following lines :—

- | | |
|--|----|
| دوشم ندا رسید ز درگاه کبریا | 1 |
| بگردون تیره ابری بامدادان برشد از دریا | 2 |
| دو شینه چون کشید شه زنگ لشکرا | 3 |
| دوش کم این گرد گرد گنبد مینا | 4 |
| در خواب دوش دیدم آن سرو راستین را | 5 |
| گرفتاج زر نهند ازین پس بسرموا | 6 |
| عید شد ساقی بیدا در گردش آور جام را | 7 |
| شکسته خامه آذر گسسته نامه قسطا | 8 |
| نسیم خلد میوزد مگرز جوئبارها | 9 |
| شاه ختن چو دوش نهان شد بمکدا | 10 |
| دو قلاع کفرند با هم مصاحب | 11 |

12	صبحدم کز جلاب مشرق برآمده آفتاب
13	خیمه زر بفت زد بوچرخ نیلای آفتاب
14	از سروش وحدتم بر گوش هوش آمده خطاب
15	ساقی امشب می پیاپی ده که من بر جای آب
16	همی بارد از ابر بارنده راغب
17	دوشم مگر چه بود که پیچم نبرد خواب
18	این چه جشنت کز و جان جهان در طربست
19	اگر نظام امور جهان بدست قضاست
20	شب گذشته که آفاق را ظلام گرفت
21	عاشق بی کفر در شرع طریقت کافر است
22	عید رمضان آمده و ماه رمضان رفت
23	بهار آمده که از گلبن همی بانگ هزار آید
24	ساقی بده رطل گوان زان می که دهقان پرورد
25	فرو بگرفته گیتی را بباغ و راغ و کوه و در
26	سخن گزافه چه رانی ز خسروان کهن
27	نهانی از نظرای بی نظیر از بس نهانستی
28	ای ترک سیم چشم سراپا چه جانی
29	بود این نکته در حکمت هوای غیب برهانی
30	شب بی گفتم خرد را گای مه گردون داذائی
31	تو ای زیلوفربویا که خورشیدت دلیاستی
32	حمد بی حد را مزد ذاتی که بی همقاستی
33	(مصحط) بنفسه رسته از زمین بطرف جویبارها

FOR THE M. A. EXAMINATION.

Books Recommended for General Reading.

1931 and subsequent years.

1. Ameer Ali.—Spirit of Islam.
2. Stanley Lane-Poole.—Table Talk of Mohamed.
3. Browne.—Literary History of Persia.
4. De Boer.—History of Philosophy in Islam (translated by E. R. Jones).

BOOKS PRESCRIBED.

1931

Subordinate.

Prose:—

1. Abul Fazl—Akbarname, Vol. II, from the beginning of Akbar's reign to the end of the VI regnal year, i.e., pp. 2-122 of the Nawal Kishore Press edition ; OR Akbarname, Part I, from
 نهضت موكب حضرت جهانباني جنت آشياني به تدبير بنگاله
 to the end of the section entitled
 نهضت موكب مقدس حضرت جهانباني جنت آشياني به خراسان و عراق
 i.e. pp. 163-245, Navalkishore Press, Lucknow, 1913.
2. Azad.—Khezana-e-Amara pp. 2-230, Nawalkishore, second edition 1900 ; OR Zuhuri-Seh-Naer (complete).

Poetry :—

1. Faizi Nal Daman, complete ; OR
Jami's Yusuf Zulaikha.
2. Jami.—Subhatul Abrar, Complete.

Principal.*Prose :—*

1. Nasiruddin Tusi—Akhlāq-e-Naseri, pp. 25-282, *i.e.*, to the end of Maqala I, Nawal Kishore edition, 1316.
2. Farhad Mirza.—Munshaat, Complete ; OR Abul Fazl—Insha, Daftar III, from *خانمہ دفتر دوم اکبر نامہ* to the end ; *i. e.* pp. 74 to 125 of the Insha printed and published by Sh. Mubarakali of Lahore.

Poetry :—

1. Anwari—Qasaid ; selections ; see Appendix No. 2 below.
2. Rumi Masnawi, Daftar V, Complete.

APPENDIX No. 2.

The Qasidas of Anwari, prescribed for the M. A. (Principal) examination of 1931, are those which begin with the following lines :—

Opening line.	Page of N. K. Edition.	No.
باز این چه جوانی و جمالست جهان را	2-6	1
ای قاعدۀ نازۀ دست تو کرم را	6-8	2
ای داده بدست بجرمارا	8-10	3
زان پس کہ قضا شکل دگر کرد جهان را	10-11	4
سپهر رفعت و بھرنوال و ابوسخا	11-12	5
سپهر رفعت و کوة وقار و بھرسخا	12-14	6
صبا بہ سبزہ بیداراست باغ دنیا را	14-16	7
نصرفزاینده باد ناصر دین را	16-17	8
اینکہ می بینم بہ بیداراست یارب یا بخواب	18-21	9
ای جهان عدل را انصاف تو مالک ارقاب	26-27	10
چون وقت صبح چشم جهان میرشد ز خواب	27-29	11
ای ترک می بیدار کہ عیدست و بہمنست	32-34	12
ای ملک بھین رکن ترا کلک وز پرست	34-36	13
اگر محول حال جهانیان نہ قضاست	38-42	14
آخوای خاک خراسان داد یزدانت نجات	42-43	15
روز می خوردن و شادی و نشاط و طربست	46-48	16
زمانہ گذران بس حقیر و مختصرست	52-54	17
شاہا زمانہ بندہ در گاہ جاہ تست	54-55	18
(مرئیم) شہر پرفتہ و پر مشغلہ و پر غوغاست	55-57	19
صدر ہیکہ از و دولت و دین جفت ہذا تست	57-58	20
عرصہ مملکت غور چہ نا محدودست	59-60	21
ملک مصروفست و حصن ملک حصین است	60-62	22

Opening line.	Pages of N. K. Edition	No.
گر چرخ را درین حرکت هیچ مقصد است	62-63	23
ملک یوسف ای حاتم طی غلامت	63-65	24
می بیاور که جشن دستور است	65-67	25
منصب از منصبت رفیع تر است	69-71	26
ملک اکنون شرف و مرتبه و نام گرفت	71-72	27
منبت از کرد گار دادگوست	73-75	28
نوش لب لعل تو قیدت شکر شکست	75-73	29
هر چه ز آب و آتش و خاک و هوای عالم است	78-80	30
یارب این بارگاه دستور است	80-81	31
گر لب لعل دلبرم شکر است	90-91	32
ای بشاهی ز همه شاهان فرد	91-92	33
آفرین بر حضرت دستور و بردستور باد	92-94	34
ای نمودار سپهر لا جورد	99-100	35
گردل و دست بهر کان باشد	124-126	36
بر سمرقند اگر بگفتری ای باد سحر	167-171	37
خرد را دوش میدگفتم که ای اکسیر دافائی	377-378	38
ای مسلمانان فغان از دور چرخ چنبری	399-406	39
نیستم بیگانه از اعمال و احکام نجوم (قطعه)	704-705	40

1932

Subordinate.

Prose—

1. Azad—Khezana-e-Amera, pp. 2-230, Navalkishore, 1900 ;
or

Zuhuri—Seh Nasr, (complete.)

2. Abul Fazl—Akbarname, Vol. I, pp. 224-306, Calcutta, Beng. As. Soc. ed. *i.e.*, pp. 245-336, Navalkishore, Lucknow, 1913.

Poetry—

1. Jami—Subhatul Abrar.
2. Salman Sawji—Qasaid, from the beginning to the end of Radif-e-Dāl.

Principal.

Prose—

1. Farhad Mirza—Munshaat ;
or

Abul Fazl—Insha, Daftar III from "Khatima-e-Daftar-e-Duwum-e-Akbar-name" to the end ; *i.e.* from pp. 74—125 of the Insha-e-Abul Fazl printed and published by Shaikh Mubarak Ali of Lahore.

2. Jalaluddin Dawani—Akhlāq-e-Jalali, from the beginning of the book to the end of the first Lame, *i.e.*, pp. 2-191 (omitting the Chapter on Music). Nawalkishore, 1283, A. H.

Poetry—

1. Rumi—Masnawi, Daftar V.
2. Urfi—Qasaid, Selections ; the Qasidas beginning with the following lines :—

ای داشته در سایه هم تیغ و قلم را 1

اقبال کرم می گرد ارباب هم را	2
آن طوبییم که برگ و برش داغ و اخگر است	3
عشق کو تا خرد بر اندازد	4
از آسمان و زمین مژده در فغان آمد	5
زهر گلی که هوای دلم نقاب کشاد	6
هر سوخته جانی که به کشمیر در آید	7
صدیده دم که زدم آستین بشمع شعور	8
زهی لوای نبوت به نسبت منصور	9
جهان بگشتم و دردا که هیچ شهر و دیار	10
آمد آشفته بخوابم شبی آن مایه ناز	11
کجا بحسن بود باتو همعنان نرگس	12
این بارگاه کدست که گویند بی هراس	13
دل باغبان عشق و حیرانی گلستانش	14
چهره پر از جهان رخت کشد چون بهار	15
ای شب هجر تو در دیده خورشید سبیل	16
ای موافق نسبت ذات تو شان علم	17
من کدستم آن سالک کورین مهیوم	18
منم آن سحر بیان کز مده طبع سلیم	19
چون گرد باد آه ز خاکم کشد علم	20
صبح عید که در فکیم گاه ناز و نعیم	21
گر سر بصبغت گل و سوسن در آورم	22
رفتم ای غم ز در عمو شتابان رفتم	23
صبغدم چون در دمد دل صور شیون زای	24
عادت عشاق چیست مجلس غم داشتن	25
چیت آن جوهر هدایت فن	26
ای متاع درد در بازار جان انداخته	27
کردم ز شراب ناب توبه	28
بیا که با دلم آن میکند پریشانی	29
شکست رنگ شباب و هنوز رعنائی	30

1933

Subordinate.

Prose—

1. Abul Fazl—Akbarname, same as in 1932.
2. Khondmir—Habib-us-Siyar, Life of the Prophet.

Poetry—

1. Salman sawji—Qasaid, same as in 1932.
2. Attar—Mantiq-ut-Tair.

Principal.

Prose—

1. Jalaluddin Dawani, as in 1932.

2. Mirkhond—Rauzat-us-Safa, from the reign of Bahman to the end of the Sasanian Dynasty.

Poetry—

1. Urfi—Qasaid, Selections, as in 1932.
2. Rumi—Masnawi, Daftar VI.

CHAPTER VI.—ARABIC.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Majanil Adab, Vol. II, Chapters V, VI and VII.
2. Sayyeduna Ali—Diwan, pp. 61-91 Karimi Press, Bombay, 1329 A. H.

1932

1. Ahmad Sherwani—Nafhat-ul-Yaman (Chapter I, the first half)
2. Sayyeduna Ali—Diwan, pp. 92-122, Karimi Press, Bombay, 1329 A. H.

1933

1. Ahmad Sherwani—Nafhat-ul-Yaman (Chapter I, the Second half).
2. Sayyeduna Ali—Diwan, pp. 31-60, Karimi Press, Bombay, 1329 A. H.

FOR THE INTERMEDIATE EXAMINATION.

1931

1. Ar-Rauzatuz Zakiyya, pp. 1-69 ; Baptist Mission Press, Calcutta, 1905 ;
or
Ibn-ul-Muqaffa—from باب الحماة المطوقة to the end of باب الاسد و ابن
أوي الناسى
2. Al Qur'an—Chapter 1 (Al Fatiha) and from Chapter 88 (Al Ghashiya) to the end of Chapter 114 (An Nas).
3. Abul Atahiyya—Diwan (Anwar-uz-Zahiyya), pp. 2-91, from the beginning of the book to the end of Qafiyat-uz-Zal ; Beyrout, 1914.

1932

1. Ibn-ul-Muqaffa—Kalila wa Dimna ; باب الاسد والثور and باب الفحص عن امرده منه
2. al Busari—Qasidat-ul-Burda.

1933

1. Ibn-ul-Muqaffa—Kalila wa Dimna ; from باب الحماة المطوقة to the end of باب الاسد و ابن أوي الناسى
2. Ibn Duraid—al Maqsura.

FOR THE B.A. EXAMINATION.

1931

Pass Course.

1. Ghazzali—Ihya-ul-Ulum, Juz. IV, pp. 192-301, i.e., from the Chapter on Mahabbat to the end of the Chapter on Tafakkur wa'l I'tebar ; Naval Kishore ; 1890 A. D.
2. Al Moallaqat—Poems I, II, III and IV.
3. Al Qur'an—Part XXIX.
4. Abu Tammam—Hamasa, Chapter I, first half.

Additional for Honours Course.

1. Abdul Qahir Jurjani—Dalail-ul I'Jaz, from the beginning to p. 78, i.e. upto 'al Kalam fin Nakirah' ; Egypt, 1331 A. H.

2. Al Mufaddal ad Dabbi—Mufaddaliyyat (Mukhtarat) part I, pp. 2-60 ; Egypt, 1324 A. H.
3. Ibn-e-Tiqtaqa—Al Fakhri—first half, *i.e.*, pp. 3—120, Mahmud Tawfiq's edition ; Rahmaniyya Press, Egypt, 1340 A. H.
4. Ibn-ul Farid—Diwan, complete ; Yusufi Press, Egypt ; 1341 A. H.

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Arabic for the **Honours** Examination.)

1. Ghazzali—Minhaj-ul-Abedin, complete.
2. Abu Nuwas—Diwan, pp. 16-120 ; Hamidiyyah Press, Cairo, 1322-23 A. H.
3. Abu Abdillah al Basri—Tabaquat-ush-Shuara, first half, up to Shuara-e-Jahiliyya.
4. Mutanabbi—Diwan, Radif of 'Mim', complete ; *i.e.*, pp. 228-271, of Mujtabai Press Ed., Delhi, 1330 (1912 A. D.)

1932

Pass Course.

1. Al Quran—Part XXIX, as in 1931.
2. Abu Tammam—Hamasa, Ch. I, first half, as in 1931.
3. Mutanabbi—Diwan, pp. 1-73, *i.e.*, from the beginning to the end of the Qafiyat-ut-Ta ; Deoband, 1339 A. H.
4. Ghazzali—Ihya-ul-Ulum. Chapter on Munjiyyat alone, omitting the last section on Death, *i.e.*, pp. 2-249, Nawalkishore ed., 1281 A. H.

Additional for Honours Course.

1. Ibn-e-Tiqtaqa—Al Fakhri, first half, *i.e.*, pp. 3-120, Mahmud Tawfiq's ed., Rahmaniyya Press, Egypt, 1340 A. H., as in 1931.
2. Ibn Farid—Diwan, complete, as in 1931.
3. Talat Harb—Tarikhu Duwalil Arab, Part I, complete, *i.e.*, pp. 11-378, Egypt, 1323 A. H.
4. Hassan b. Sabit—Diwan, from the beginning to p. 135, *i.e.*, to the end of Qafiyat-ul-Dal, Egypt, 1331 A. H.

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Arabic for the **Honours** Examination.)

1. Abu Abdillah al Basri—Tabaquat-ush-Shuara, as in 1931.
2. Mutanabbi—Diwan, as in 1931.
3. Majanil adab—Vol. VI, chaps. I, II, III and XIII.
4. Al Busiri—Q. Burdah.
5. Ka'b b. Zuhair—Q. Banat Suad.

1933

Pass Course.

1. Mutanabbi—Diwan, as in 1932.
2. Ghazzali—Ihya-ul-Ulum, as in 1932.
3. Al Quran, Chapters XXIV (an Nur), XXXVI (Yasin), XLVIII (al Fath) and LV (ar Rahman).

4. Al Muallaqat—Poems V, VI and VII.

Additional for Honours Course.

1. Talat Harb—Tarikhu Duwal-il-Arab, as in 1932.
2. Hasan b. Sabit—Diwan, as in 1932.
3. Badiuzzaman—Maqamat, first twenty.
4. Farazdaq—Diwan, complete, Beyrout, 1324 A. H.

Additional Two Papers of Pass Standard.

(To be taken by such candidates only as offer all the *seven* papers in Arabic for the **Honours** Examination.)

1. Majanil Adab—Vol. VI, as in 1932.
2. al Busiri—Q. Burdah, as in 1932.
3. Ka'b b. Zuhair—Q. Banat Suad, as in 1932.
4. Ghazzali—Minhaj-ul-Abedin, complete, as in 1931.
5. Abu Nuwas—Diwan, as in 1931.

FOR THE M. A. EXAMINATION.

1931

Subordinate.

Prose :—

1. Al Quran—Chapter II (The Cow).
2. Sayyeduna Ali—Nahjul Balagha, pp. 110—201 (Beyrout edition).

Poetry :—

1. Antara—Diwan from the beginning to the end of the Qafiyyat-ur-Rá, *i.e.* pp. 1-28, Yusufiyya Press, Egypt.
2. Buhturi—Diwan ; pp. 2-80 (Jawaib ed. of Constantinople).

Principal.

Prose :—

1. Ibn Qutaiba—Ash She'r wash Shu'ará.
2. Ibn Khallikan—Wafayat ; from the beginning of the book up to Harful Jin (excluding).

Poetry :—

1. Abu Tammam—Hamasa, Ch. II and III.
2. Nabigha—Diwan, complete ; Al Hilal Press, Egypt, 1911, A. D.

BOOKS RECOMMENDED FOR GENERAL READING.

1. Sakkaki.—Miftah-ul-Ulum.
2. Ibn Miskawaih.—Tahzib-ul-Akhlaq.
3. Baidawi.—Kashshaf-ul-Qur'an.
4. Qadi' Ayad.—Kitab-ush-Shifa.
5. J. Zaidán.—Adáb-ul-Lughat-il-'Arabiyya.
6. Fakhruddin Razi—at Tafsir-ul-Kabir.
7. Zamakhshari—Kashshaf.
8. Husáin al Waez al Káshfi-Tafsir-e-Husáini.

1932

Subordinate.

1. Al Qur'ān—Chapters : Āl-e-'Imrān ; and A'rāf.
2. Ibn-ur-Rumi—Diwan, ed. by Gilānī.
3. Sayyeduna Ali—Nahj-ul-Balagea, pp. 110-201 (Beyrout ed.)
4. Buhturi—Diwan, pp. 2-80 (Jawaib Ed. of Constantinople).

Principal.

1. Ibn Khallikan—Wafayat from the beginning of the book up to Harf-ul-Jim (excluding).
2. Nabigha—Diwan, Complete ; al Hilal Press, Egypt, 1911 A.D.
3. Qairowani—Zahr-ul-Adab, Part I, first half.
4. Abul Ala al Ma'arri—Siqt-uz-Zand ; from the beginning of the book to p. 61; Hindiyya Press, Egypt.

1933

Subordinate.

1. Al Qur'ān—same as in 1932.
2. Ibn-ur-Rumi—Diwan, as in 1932.
3. Jahiz—al Bayan ; from باب البیان to the end of the Chapter entitled : باب من الخطب القصار عن خطب السلف و مواظب الناس
4. Antara—Diwan, from the beginning to the end of the Qafiyyat-ur-Rā, i. e., pp. 1-28, Yusufiyya Press, Egypt.

Principal.

1. Qairowani—Zahr-ul-Adab, part I, first half.
2. Abul Ala al Ma'arri—Siqt-uz-Zand, as in 1932.
3. Ibn Khaldūn—Muqaddima, pp. 1-104, Egypt ed.
4. Ibn Farid—Diwan, complete.

CHAPTER VII.—URDU.**FOR THE MATRICULATION EXAMINATION.**

1931

Prose :—

Ibn-ul-Waqt by M. Nazir Ahmad, complete.

Poetry :—

Madd-o-Jazr-e-Islam (the Musaddas) by M. Hali. (complete except the Zamima.)

FOR THE B. A. Pass EXAMINATION.

1931

Prose :—

1. Shibli—Sherul Ajam, Volume IV.
2. Nazir Ahmed—Roya-e-Sadiqua.
3. Abdur Razzaq—Al Baramika.

Poetry :—

1. Amir Minai—Mirat-ul-Ghaib, pp. 2-218, *i. e.*, upto the end of Radif-e-Nun ; Navalkishore, 1309 A. H.
2. Atish—Ghazaliyyat, from No. 201 to the end of the Diwan-e-Awwal.
3. Akbar—Kulliyyat, part III, pp. 1-139 ; Naqib Press, Badaun, U. P.

1932**Poetry :—**

1. Amir Minai—Mirat-ul-Ghaib, as in 1931.
2. Atish—Ghazaliyyat, as in 1931.
3. Akbar—Kulliyyat, Part III, as in 1931.

Prose :—

4. M. Shibli—al Ghazzali.
5. Azad—Nairang-e-Khiyal.
6. Abdul Hayy—Gul-e-Rana, Part III, pp. 337-495, Maarif Press, 1342 A. H.

1933**Prose :—**

1. 2. 3. Same as in 1932.

Poetry :—

4. Atish—Ghazaliyyat, Nos. 1-200, N. Kishore ed.
5. Nasikh—Diwan 1, Ghazaliyyat, 1-186, *i. e.*, up to the end of Radif-e-Ha-e-Hawwaz.
6. Zauq—Qasaed, Azad's ed.

FOR THE M. A. EXAMINATION.**1931****Subordinate.****Prose :—**

1. Hali—Hayat-e-Jawed, complete.
2. Tahzib-ul-Akhlaq, Volume III.
3. Abdus Salam—Sher-ul-Hind, Part I.

Poetry :—

1. Zafar—Kulliyyat, Vol. I, pp. 2-154, *i. e.*, to the end of Radif-e-Fa ; Fathul Karim Press, Bombay.
2. Mir—Kulliyyat, Diwans II and III, pp. 156—326, Naval Kishore Press.
3. Momin—Ghazaliyyat, pp. 151-313 ; Naval Kishore Press edition, 1284 A. H.

Principal.**Prose :—**

1. Azad—Sukhundan-e-Fars.
2. Shibli—al Faruq.
3. Sayyed Ahmed Khan—Khutabat-e-Ahmadiyya.

Poetry :—

1. Mohsin Kakorwi Kulliyyat-e-Naat ; pp. 32-155 ; Nazir Press, Lucknow, 1334 A. H.

2. Anis wa Dabir—Marasi, Volume I of each.
3. Wali.—Diwan, complete.

1932.

Subordinate.

Prose :—

- | | | |
|---------------------|---|-------------|
| 1. Hali. | } | As in 1931. |
| 2. Tahzib-ul-Akhlak | | |
| 3. Abdus-Salam. | | |

Poetry :—

1. Dard—Diwan, complete.
2. Mir—Kulliyat, pp. 2-155, to the end of Diwan I, Navalkishore, 1325 A.H.
3. Momin—Qasaid wa Ghazaliyyat, pp. 7-152, to the end of Radif-e-Ha ; Naval-kishore, 1923.

Principal.

Prose :—

1. Azad—Sukhandan-e-Fars.
2. Shibli—al-Faruq.
3. Sayyed Ahmed Khan—Khutabat-e-Ahmadiyya.

Poetry :—

1. Iqbal—Bang-e-Dara.
2. Anis-wa-Dabir—Muntakhabat.
3. Ghalib—Diwan, complete. (Only Ghazaliyyat).

1933.

Subordinate.

Poetry :—

- | | | |
|-----------|---|-------------|
| 1. Dard. | } | As in 1932. |
| 2. Mir. | | |
| 3. Momin. | | |

Prose :—

1. Azad—Ab-e-Hayat, complete.
2. Shibli—Sirat-un-Nabi, Volume (Mujallad) II, beginning with A. H. 9. (Maarif Press edition).
3. Hali—Muqaddama.

Principal.

Poetry :—

- | | | |
|-------------------|---|-------------|
| 1. Iqbal. | } | As in 1932. |
| 2. Anis-wa-Dabir. | | |
| 3. Ghalib | | |

Prose :—

1. Azad—Darbar-e-Akbari.
2. Tahzib-ul-Akhaq, Vol. I.
4. Shibli—Mowazana.

CHAPTER VIII.—FRENCH.
FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

Jean de la Bréte.—Mon oncle et mon curé. Collection Nelson.

Labiche.—Le voyage de Monsieur Perrichon. Any edition.

Recommended :—

Crouzet.—Grammaire française simple et complète. Henri Didier, Paris.

Ph. Martinon.—Comment on prononce le français. Larousse, Paris.

Dictionaries :—

Le petit Larousse illustré. Larousse, Paris.

Elwall.—Petit Dictionnaire Franco-anglais, Anglo-français. Delagrave, Paris.

1932

André Laurie.—Une année de collège à Paris. Hachette, Paris.

Emile Augier.—Le gendre de Monsieur Poirier. Any edition.

*Recommended :—*As in 1931.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

Estaunié.—L'infirme aux mains de lumière. Perenczi, Paris.

Molière.—L'Avare. Any edition.

Recommended :—

As for First Year Arts for 1931.

1932

Henri Bordeaux.—La Maison. Plon, Paris.

Berthon.—Specimens of Modern French Verse. Macmillan & Co. Omit pp. 1-18 and 187 to end.

Recommended :—

As in First Year Arts for 1931.

FOR THE B.A. EXAMINATION.

1931

Pass Course.

Paper I—

1. Fustel de Coulanges—La cité antique. Perrin, Paris.
2. Corneille.—Polyeucte. Any edition, together with a general survey of L'Histoire au 19^e siècle.
3. Unseen translation from English into French.

Paper II—

1. Joubert.—*Pensées*. Perrin, Paris.
2. Molière.—*Les Femmes savantes*. Any edition.
3. Unseen translation from French into English.

To be consulted.—

Brachet et Dussouchet.—*Grammaire française, Cours Supérieur*. Hachette, Paris.
 Abry et Crouzet.—*Histoire de la littérature française*. Henri Didier, Paris.
 Jacques de Bainville.—*Histoire de France*. Plon, Paris.

Additional for Honours Course.*Paper I—*

(A) Modern Literature, First period, 1789-1850.

Books prescribed.—

André Chénier.—*Pages choisies*. Oxford University Press.
 Victor Hugo.—*Notre Dame de Paris*. Oxford University Press.
 Victor Hugo.—*Ruy Blas*. Oxford University Press.
 G. Lanson.—*Conseils sur l'Art d'écrire*. Hachette, Paris.

To be consulted.—

As for Pass Course in 1931 and
 Jean Bertheroy.—*Eloge d'André Chénier*. A. Collin, Paris.
 Mabilleau.—*Victor Hugo*. Hachette, Paris.
 Pierre Lasserre.—*Le Romantisme français*. Plon, Paris.

Paper II—

(B) Main Currents of French Literature.

Books prescribed.—

La Rochefoucauld.—*Sentences et Maximes*. Larousse, Paris.
 Louis Veuillot.—*Les odeurs de Paris*. Collection Gallia (Dent and Sons).
 Rostand.—*L'Aiglon*. Fasquelle, Paris.
 Victor Giraud.—*La Sagesse française*. Hachette, Paris.

To be consulted.—

Grandsaigne d'Hauterive.—*Le Pessimisme de la Rochefoucauld*. Armand Collin, Paris.
 J. Bourdeau.—*La Rochefoucauld*. Hachette, Paris.

Paper III—

A three hours' paper including an essay of two hours and a translation or paraphrase.

Additional Two Papers of Pass Standard.

(To be taken by such candidates as offer all the *seven* papers in French for the **Honours** Examination.)

Paper III—

History of Modern Literature: First period, 1789-1850, *cf.* Abry and Crouzet
Histoire de la littérature française.

Paper IV—

Grammar and Philology, *cf.* Brachet and Dussouchet.

1932

Pass Course.*Paper I—*

As in 1931 together with an unseen translation from English into French.

Paper II—

1. La Bruyère.—Morceaux choisies. Hatier, Paris.
2. Racine.—Athalie. Any edition.
3. Unseen translation from French into English.

To be consulted.—As in 1931.

Additional for Honours Course.*Paper I—*

(A) As in 1931 for Honours Paper II.

Paper II—

(B) Modern French Literature, Second period, 1850-1890.

Books Prescribed.—

François Coppée.—Pages choisies. Oxford University Press.

Pailleron.—Le Monde où l'on s'ennuie. Any edition.

Taine.—Nouveaux essais de critique et d'histoire. Hachette, Paris.

Albalat.—Comment il faut écrire. Collin, Paris.

Books consulted.—

As for Pass Course in 1931, and

Gauthier Ferrière.—François Coppée et son oeuvre. Mercure de France, Paris.

Victor Giraud.—Hippolyte Taine. Hachette, Paris.

Additional Two Papers of Pass Standard.

(To be taken by such candidates as offer all the *seven* papers in French for the **Honours** Examination.)

Paper III—

History of Modern Literature : Second period, 1850-1890, *cf.* Abry and Crouzet, Histoire de la littérature française.

Paper IV—

As in 1931.

FOR THE M.A. EXAMINATION.

1931

Subordinate.*Paper I.—*

Translation from French into English and English into French. (All unseens.)

Paper II—

Charles Péguy : Oeuvres and in particular La Tapisserie de Notre Dame. (Nouvelle Revue française, Paris.)

To be consulted :

J. and A. Tharaud Etude sur Ch. Péguy.

Edmond Rostand.—Oeuvres dramatiques, en particulier—L'Aiglon Fasquelle, Paris.

Principal.

Paper III—

Clédat, Grammaire.

Gaston Paris : Extraits de la Chanson de Roland, par Gaston Paris (Hachette, Paris).

Gaston Paris : Extraits des Chroniqueurs, Français, Hachette, Paris.

Charles d'Orléans.—Poésies. Edition Taillierent, Champion, Paris.

Paper IV—

A Survey of French Literature in the second half of the XVIIth century, in particular Emil, Faquet, Histoire de la Poésie française, Vol II. Au temp de, Boileau (Boivin & Cie.)

A Survey of French Literature in the first half of the XVIIIth century.

En particulier : Choix de Lettres du 18e Siècle. Hachette.

Paper V—

Mouvement Littéraire. Le Théâtre Moderne en France, en Particulier—Augustin Filon. De Dumas a Rostand.

Paper VI—

An essay to be written in the French language.

1932

Subordinate.

Paper I—

As in 1931.

Paper II—

Rostand as in 1931.

Jacques de Bainville. Histoire de France. Plon, Paris.

Principal.

Paper III—

Clédat et Paris, as in previous years.

Charles d'Orléans as in 1931.

Paris et Langlois : Chrestomatie du Moyen Age. Hachette, Paris.

Paper IV—

A Survey of French Literature in the first half of the 18th century as in 1931.

A Survey of French Literature in the second half of the 18th century. In particular—Emile Faguet : 18e siècle. (Boivin & Cie.)

Paper V—

Mouvement littéraire : Les Salons littéraires au 18e siècle, en particulier—De Ségur ; Julie de Lespinasse. (Nelson.)

Paper VI—

As in 1931.

CHAPTER IX—GERMAN.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Goebel.—Hermann der Cherusker ; ed. J. Esser (Macmillan & Co.)
2. Deutsche Lyrik.—Third period.

1932

1. Hauff.—Das Bild des Kaisers ; ed. K. Breul (Cambridge U. P.)
2. Deutsche Lyrik.—Fourth period.

1933

1. Gerstäcker.—Irrfahrten : ed. Sturm (D. C. Heath & Co.)
2. Deutsche Lyrik.—Fifth period.

1934

1. Fontane.—Vor dem Sturm ; ed. Weiss (Macmillan & Co.)
2. Schiller.—Ballads.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Heine.—Die Harzreise (D. C. Heath & Co.)
2. Golden Treasury Series.—Balladen und Romanzen, Erste Periode.

1932

1. Eichendorff.—Aus dem Leben eines Taugenichts (D. C. Heath & Co.)
2. Uhland.—Ernst Herzog von Schwaben (Cambridge U. P.)

1933

1. Otto Ludwig.—Zwischen Himmel und Erde (D. C. Heath & Co.)
2. Halm.—Griseldis (Clarendon Press, Oxford).

1934

1. Sybel.—Prinz Eugen von Savoyen.
2. Golden Treasury Series.—Balladen und Romanzen, Zweite Periode.

FOR THE B. A. EXAMINATION.

1931

Pass Course.

1. Freytag.—Soll und Haban. (S. Hirzel, Leipzig.)
2. (a) Goethe.—Iphigenie auf Tauris ; ed. K. Breul (Pitt Press Series).
- (b) Heine.—Prosa ; ed. Buchheim (Clarendon Press).
3. Period of Literature.—The Dawn of German Literature. (Scherer's History of German Literature).

Additional for Honours Course.

[Two papers will be on the texts prescribed. Some knowledge will be required of literature and of the philosophical or literary or historical environment of the

authors of the books prescribed. The third paper will contain a short essay in German to which preponderance in marking is given, paraphrase of an unseen passage, and translation, English into German and *vice versa*, unseen.]

Honours Paper I—

1. (a) Grillparzer.—Des Meeres und der Liebe Wellen ; ed. J. L. Kind (Oxford University Press).
- (b) Grillparzer.—Der Traum ein Leben ; ed. Meyer (Heath's Modern Language Series).
2. Schiller : Wallenstein.—Wallensteins Lager, Piccolomini ; ed. Breul (Macmillan & Co.)

Honours Paper II—

3. Lessing.—Minna von Barnhelm ; ed. S. W. Cutting (Macmillan & Co.)
4. Scheffel.—Ekkehardt ; ed. C. Wenckebach.

Honours Paper III—

5. Unseens and Essay.

Additional Two Papers of Pass Standard.

(To be taken up by those candidates only who offer all the *seven* papers in German for the **Honours** Examination.)

Paper 1—

- (a) Goethe.—Hermann und Dorothea.
- (b) Voss.—Luise.

Paper 2—

- (a) Schiller.—Jungfrau von Orléans.
- (b) Goethe.—Italienische Reise.

1932

Pass Course.

1. As in 1931.
2. (a) Schiller.—Maria Stuart.
- (b) Keller.—Kleider machen Leute ; ed. Lambert (D. C. Heath & Co.)
3. As in 1931.

Additional for Honours Course.

Honours Paper I—

1. Weber.—Dreizehnlinden : I-XII.
2. (a) Goethe.—Götz von Berlichingen.
- (b) Droste-Hülshoff.—Die Judenbuche ; ed. Eckelmann (Oxford University Press).

Honours Paper II—

3. } As in 1931.
4. }

Honours Paper III—

5. Unseens and Essay.

Additional Two Papers of Pass Standard.

(To be taken up by those candidates only who offer all the *seven* papers in German for the **Honours** Examination.)

Paper 1—

(a) Goethe.—Leiden des jungen Werther.

(b) Lessing.—Minna von Barnhelm.

Paper 2—

As in 1931.

1933

Pass Course.

1. Goethe.—Hermann und Dorothea ; ed. P. S. Allen (Ginn & Co.)
2. As in 1932.
3. Period of Literature.—Weimar Romanticism. (Scherer's History of German Literature.)

Additional for Honours Course.

Honours Paper I—

1. }
 2. }
- } As in 1932.

Honours Paper II—

3. Schiller.—Wallensteins Lager, Piccolomini.
4. Grillparzer.—Sappho.

Honours Paper III—

5. Unseens and Essay.

Additional Two Papers of Pass Standard.

(To be taken up by those candidates only who offer all the *seven* papers in German for the **Honours** Examination.)

Paper 1—

As in 1932.

Paper 2—

- (a) Schiller.—Wilhelm Tell.
- (b) Körner.—Zriny.

1934

Pass Course.

1. As in 1933.
2. (a) Freytag.—Die Verlorene Handschrift ; ed. Hewett (Macmillan & Co.)
(b) Hauff.—Lichtenstein ; ed. Vogel (D. C. Heath & Co.)
3. Period.—As in 1933.

Additional for Honours Course.

Honours Paper I—

1. Kleist.—Käthchen von Heilbronn.
2. (a) Sudermann.—Die Heimat (D. C. Heath & Co.)
(b) Immermann.—Der Oberhof.

Honours Paper II—

3. }
4. } As in 1933.

Honours Paper III—

5. Unseens and Essay.

Additional Two Papers of Pass Standard.

(To be taken up by those candidates only who offer all the *seven* papers in German for the **Honours** Examination.)

Paper 1—

- (a) Lessing.—Nathan der Weise.
(b) Kleist.—Michael Kolhass.

Paper 2—

As in 1933.

FOR THE M. A. EXAMINATION.

1931

Subordinate.*Paper I.—*

Translation of unseens :—English-German, German-English, and Paraphrase.

Paper II.—

History of German Literature.—Period from 1840-1920.

Particular study of :—

- (1) Gerstäcker.—Die beiden Sträflinge.
- (2) Sudermann.—Frau Sorge.
- (3) Weber.—Dreizehnlinden.
- (4) Hauptmann, G.—Einsame Menschen.

Recommended :—

- (1) Biese.—Deutsche Literatur-Geschichte, Vol. III.
- (2) Bartel. do. do. do.

Principal.*Paper III.—*

Modern German Lyric.

Recommended—

H. Spiero.—Geschichte der deutschen Lyrik seit Claudius.
Ermatinger, E.—Die deutsche Lyrik seit Herder.
Busse.—Lyrik.
Findels R.—Geschichte der deutschen Lyrik.

Paper IV.—

Middle High German :

Prescribed : Old High German Primer, J. Wright.

Middle High German Primer, J. Wright.

Recommended—

Historical Grammar of the German Language, Trenchman and Behagel,

Historical Grammar of the German Language, J. Wright.

The German Language, Diekhoff.

(b) Classical period of Middle High German Literature as in Biese: Deutsche Literatur-Geschichte, Vol. I.

Scherer: History of German Literature.

Paper V.—Texts :—

- (1) Bethge.—Lyrik (Hesse and Becker, Leipzig.)
- (2) Goethe.—Poems.
- (3) Schiller.—Wilhelm Tell.
- (4) Goethe.—Faust I.
- (5) Freytag.—Die Verlorene Handschrift.
- (6) Keller.—Der Grüne Heinrich.
- (7) G. Hauptmann.—Die Weber.
- (8) Frenssen, G.—Untergang der Anna Holmann.

Paper VI.—Essay.

1932

Subordinate.

Paper I.—As in 1931.

Paper II.—

History of German Literature.—Period from 1750-1800.

Particular study of :—

1. Goethe.—Götz von Berlichingen.
2. Schiller.—Jungfrau von Orléans.
3. Lessing.—Laokoon.
4. Wieland.—Abderiten.

Recommended :—

Biese.—Deutsche Literatur-Geschichte, Vol. II.

Hettner.—Geschichte der deutschen Literatur im 18ten Jahrhundert.

Principal.

Paper III.—

Development of the Classical Drama in German Literature.

Recommended :—

1. Busse.—Das Drama.
2. Witkowski, G.—Das deutsche Drama im 19ten Jahrhundert.
3. Benjamin—Ursprung des deutschen Trauerspiels.
4. Holl, K.—Geschichte des deutschen Lustspiels.

Paper IV.—As in 1931.

Paper V.—Texts :—

- (1) Lessing.—Minna von Barnhelm.
- (2) Goethe.—Iphigenie auf Tauris.
- (3) Schiller.—Maria Stuart.
- (4) Kleist.—Prinz Friedrich von Homburg.
- (5) Grillparzer.—Sappho.
- (6) Freytag.—Ingo.

(7) Heine.—Buch der Lieder.

(8) Paul Heyse.—Stark wie der Tod.

Paper VI.—Essay.

1933

Subordinate.

Paper I.—

As in 1932.

Paper II.—

History of German Literature, 1800-1870.

Recommended.—

As in 1930.

Principal.

Paper III.—

Development of the Novel since 1840.

Recommended.—

As in 1930.

Paper IV.—As in 1932.

Paper V.—Texts :—

(1) Frenssen.—Otto Babendieck.

(2) Maun, Henrich.—Der Kopf, Roman der Führer.

(3) Kellermann, B.—Der Tunnel.

(4) Schnitzler, A.—Der Weg ins Freie.

(5) Strauss und Torney.—Der Jüngste Tag.

(6) Wassermann J.—Faber oder Verlorene Jahre.

(7) Schiller.—Wallenstein, Trilogie.

(8) Grillparzer.—Medea.

Paper VI.—Essay.

CHAPTER X.—PORTUGUESE.

FOR THE MATRICULATION EXAMINATION.

1931

1. C. Castelo Branco : Amor de Perdicão.

2. Augusto Gil : Alba Plena.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

Antero de Figueiredo—Jornadas de Portugal.

Guerra Junqueiro—Os Simples.

1932

Julio Diniz—As Pupilas do Sr. Reitor.

Antonio Nobre—So,

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

Eca de Queiroz.—A Cidade e as Serras.

Antero de Quental.—Sonetos.

1932

Julio Dantas.—Patria Portuguesa.

Alexandre Herculano.—A Harpa do Crente.

FOR THE B. A. Pass EXAMINATION.

1931

1. (a) Tomás Ribeiro.—D. Jaime.
(b) Camões.—Lusiadas (Cantos VI-X)
2. (a) Fidelino de Figueiredo.—História da Literatura Romantica.
(b) Latino Coelho.—Luis de Camões.

1932

Pass Course.

1. (a) Fidelino de Figueiredo.—História da Literatura Romantica.
(b) Latino Coelho.—Luis de Camões.
2. (a) Antero de Quental.—Odes Modernas.
(b) Camões.—Lusiadas (Cantos I-V),

Additional for Honours Course.

Paper I.—

1. Camilo Castelo Branco.—Amor de Salvacao.
Alexandra Herculano.—O Monge de Cister.
2. Soares de Passos.—Poesias.
A. F. de Castilho.—Amor e Melancolia.

Paper II.—

1. Fialho de Almeida.—O Paiz das Uvas.
Guerra Junqueiro.—A Morte de D. Joao.
2. Fidelino de Figueiredo.—História da Literatura Realista.
Oliveira Martins.—O Principe Perfeito.

Paper III.—

Unseens and Essay.

Additional Two Papers of Pass Standard.

(To be taken by such candidates as offer all the *seven* papers in Portuguese for
Honours Examination.)

1. Pinheiro Chages.—Tristes a Beira-mar.
Julio Diniz.—A Morgadinha dos Canaviaes.
2. Joao de Deus.—O Livro de Amor de Joao de Deus (ed. by Alfonso Lopes Vieira).
Almeida Garrett.—Frei Luis de Sousa.

FOR THE M.A. EXAMINATION.

1931

Subordinate.

Paper I.—

Unseens : Translation from English into Portuguese and *vice versa*.

Paper II.—

A study of the Portuguese language with special reference to the following specimens of Pre-Camonean literature :

Fernao Lopes—Cronica d'el-rei D. Joao I.

Garcia Resende—Cancioneiro Geral.

Rui de Pind—Cronicas.

Recommended for a study of the Portuguese language :—

Ribeiro de Vasconcelos : Grammatica Historica da Lingua Portuguesa.

Principal.

Paper III.—

A detailed and critical Study of the *Sonnets* of Camões.

Paper IV.—

A general study of all the works of Camões with relation to his life and age.

The following works to be consulted :—

Teófilo Braga—Camões, Epoca Vida.

D. F. Alexandre Lobo—*Memoria Historica e Crilica acerca de L. de Camões e suas Obras*.

Wilhelm Storck—Vida e Obras de Luis de Camões : translated by Carolina Michælis de Vasconcelos.

O. Martins—Camões, Os Lusíadas e a Renascença.

Paper V.—

Literary History—Escola Seiscentista ou Gongorica—1580–1700.

Books to be consulted :

Fidelino de Figueiredo—História da Literatura Classica.

Mendes dos Remedios—História da Literatura Portuguesa.

Paper VI.—

A special study of the following poets and prose-writers with special reference to the following Works :—

Rodrigues Lobo.—Eclogas e Priondoera.

Vasco Mousinho de Quevedo.—Afonso Africano.

Frei Luis de Souza.—Vida de D. Frei Bartolomenu dos Martires.

Antonio Vieira—Sermões.

1932

Subordinate.

Paper I.—As in 1931.

Paper II.—As in 1931.

Principal.

Paper III.—

A detailed and critical study of *Os Lusíadas*.

The following works to be consulted :—

O. Martins.—Camões, Os Lusíadas e a Renascença.

Dr. Jose Maria Rodrigues.—Fontes dos Lusíadas.

Paper IV.—As in 1931.

Paper V.—

Literary History—Escola Arcadica—1700-1825.

Books to be consulted :—

Fidelino de Figueiredo.—História da Literatura Classica.

Mendes dos Remedios.—História da Literatura Portuguesa.

Paper VI.—

A special study of the following poets and prose-writers with special reference to the following works :—

Bocage.—Sonetos.

Antonio Dinis da Cruz e Silva—Hissope.

D. Francisco Alexandre Lobo.—Discurso acerca do P. Antonio Vieira.

Antonio da Costa.—Cartas.

CHAPTER XI.—SANSKRIT.

(N. B.—The Prākṛt passages may be set at the B. A. and M. A. Examinations only.)

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Pratimā-nāṭaka (Trivandrum Sanskrit Series, No. XLII).
2. Bāṇa's Kādambarī (B. S. S. ed.) p. 5. (Āsīd aśeṣā, etc.) to p. 18 (ākaraṇyatām); and p. 102 (Evam samatīkrāmatu) to p. 110 (svabhavanam ājagāma).
3. Poetic Selections, No. I :—
 1. Mahābhārata (Kumbhakonam ed.), Ādiparvan, Chapters 144 to 147; Vanaparvan, Chapter 298; Śalyaparvan, Chapter 62.
 2. Vālmīkirāmāyaṇa (Nirṇayasagara ed.), Ayodhyākāṇḍa, Cantos 29 to 31.
 3. Aśvaghoṣa's Buddhacarita, Canto III, Stanzas 8-63.
 4. Kālidāsa's Raghuvamśa, Canto VI.
 5. Kālidāsa's Meghadūta (Prof. Pathak's ed.), Stanzas 1-24.
 6. Bhartṛhari's Nīṭisataka (B. S. S. ed.), Stanzas 3, 7, 8, 10, 12, 27, 30, 31, 38, 51, 58, 77, 90 and 100.

1932

1. Svapnavāsavadattā (Trivandrum Sanskrit Series, No. XV).
2. Bāṇa's Kādambarī (B. S. S. ed.) p. 59 (Evam tasya rājñah) to p. 75 (param kauśalam avāpa).
3. Poetic Selections, No. 2 :—
 1. Mahābhārata (Kumbhakonam ed.), Sabhāparvan, Chapters 89 (verses 13, 67,) 91, 92, 93; Vanaparvan, Chapters 72 and 74; Udyogaparvan, Chapter 81.
 2. Vālmīkirāmāyaṇa (Nirṇayasagara ed.), Āraṇyakāṇḍa, Cantos 15 and 16.
 3. Kālidāsa's Raghuvamśa, Canto XIV.

4. Kālidāsa's Meghadūta (Prof. Pathak's ed.) Stanzas 80-100.
5. Bhartṛhari's Vairāgyaśataka (B. S. S. ed.), Stanzas 10, 12, 13, 16, 30, 36, 40, 50, 61, 63, 84, 85, 88, 92, 112.
6. Jagannātha's Bhāminīvilāsa, Karuṇavilāsa.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Viśākhadatta's Mudrārākṣasa.
2. Annambhaṭṭa's Tarkasamgraha (Text only).

1932

1. Kālidāsa's Abhijñana-Śākuntala.
2. Annambhaṭṭa's Tarkasamgraha (Text only).

FOR THE B. A. EXAMINATION.

1931*

Pass Course

Paper I.—

1. Ṛgveda Selections, B. S. S. No. LVIII.
2. Laugākṣi Bhāskara's Arthasamgraha.

Paper II.—

1. Kāvyaadarśa Pariccheda I, and Kāvyaaprakāśa Ullāsa X.
2. General study (with special reference to Poetics) of :—
 1. Aśvaghoṣa's Buddhacarita, VI.
 2. Kālidāsa's Kumārasambhava, VI.
 3. Bhāravi's Kirātārjunīya, I.
 4. Māgha's Śīsupālavadha, XIV.
 5. Bihlaṇa's Vikramāṅkadevacarita, II.

Paper III. †—

Sabhāparvan † and the Bhagavadgītā.

Paper IV. †—

1. Vāsiṣṭha-dharma-sūtra.
2. Manu-Smṛti, Chapter VIII.

Additional for Honours Course.

Paper V.—

1. Chāndogya Upaniṣad, Chapters VI-VIII.
2. Bṛhadāraṇyaka Upaniṣad, Chapters III-IV.
3. Sadānanda's Vedāntasāra.

* The text-books prescribed for the B. A. Examination for 1931 and 1932 are in accordance with the revised regulations and are in supersession of those published on pages 540-543 of the Bombay University Handbook, 1928-29.

† Honours candidates offering two languages, viz., Sanskrit and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must choose Papers I and II.

‡ The Sabhāparvan prescribed is from the Ganpat Krishnaji's edition of the Mahābhārata, recently published anew by the Chitrashala Press, Poona.

Paper VI.—

Arthaśāstra of Kauṭilya, Adhyakṣa-pracāra.

Paper VII.—

Unseens and Essay.*

1932 †

Pass Course.

Paper I.—

Same as in 1931.

Paper II.—

Kāvyaprakāśa, I, II, III and X.

Paper III.—

Same as in 1931.

Paper IV.—

1. Gautama-dharmasūtra.

2. Manusmṛti, Chapters VII and IX.

Additional for Honours Course.

Paper V.—

Brahmasūtras with Śāṅkara's Bhāṣya, Adhyāya II, Pādas 1 and 2.

Paper VI.—

Same as in 1931.

Paper VII.—

Unseens and Essay.*

1933

Pass Course.

Paper I.—

1. Ṛgveda Selection, B. S. S. No. XXXVI.

2. Laugākṣi Bhāskara's Arthasamgraha.

Paper II.—

Same as in 1932.

Paper III.—

Virāṭaparvan and the Bhagavadgītā.

Paper IV.—

Same as in 1932.

Additional for Honours Course.

Paper V.—

Same as in 1932.

* For essay, History of Sanskrit Literature, Vedic period, to be studied from such books as Macdonnell's 'A History of Sanskrit Literature' pp. 1-276 and Winternitz's 'A History of Indian Literature' English Translation Vol. I, pp. 1-310, is prescribed.

† The text-books prescribed for the B. A. Examination for 1931 and 1932 are in accordance with the revised regulations and are in supersession of those published on pages 540-543 of the Bombay University Handbook, 1928-29.

Paper VI.—

Śrauta Reader :—

1. Taittirīyasamhitā I. v. 9 (from "Ahar devānām" to "Sarvam āyur eti"); II. iv. 1; II. iv. 12; II. v. 11 (from "Vakca" to "Āptyai")
2. Maitrāyaṇīsamhitā II. iv. 1; IV. iii. 4; 4. v. 7 (ten lines, upto "pratitiṣṭhati").
3. Kāṭhakaśamhitā VII. x; VIII. ix.
4. Aitareyabrāhmaṇa I. 13-15; II. 11-12; VIII. 14.
5. Tāṇḍyamahābrāhmaṇa XII. vi. 1-13.
6. Taittirīyabrāhmaṇa I. i. 2; I. i. 9; II. ii. 9; III. ii. 8-9; III. x. 9.
7. Kauṣṭakibrāhmaṇa XII. iii; XVII. vii; XXVI. v.
8. Śatapathabrāhmaṇa I. i. 4. 14-19; I. vii. 2. 1-5; III. vi. 2. 2-8; VI. i. 3. 1-20; XI. v. 4. 1-18; XI. v. 7. 1-10; XII. v. 2. 1-15; XIV. iv. 2. 23-29.
9. Jaiminīyabrāhmaṇa I. 125-127 (JAOS. xxviii. pp. 82f.); I. 154-155; II. 438-440 (JAOS. xix, Second Half, pp. 99f); III. 18; III. 64 (JAOS. xviii, p. 17); III. 101; III. 197.
10. Jaiminīyopaniṣadbrāhmaṇa III. 29.
11. Aitareyāranyaka V. iii. 3.
12. Taittirīyāranyaka II. x.
13. Bṛhadāranyakopaniṣad I. iii. 1-28; V. ix-xi.
14. Chāndogyopaniṣad III. i-v; V. xi-xviii; VIII. vii-xii.
15. Kenopaniṣad, Khaṇḍas, iii and iv.
16. Praśnopaniṣad I.
17. Muṇḍakopaniṣad I. ii; III. i.
18. Aitareyopaniṣad I-III.
19. Nirukta I. 12-18; VII. 1-7.
20. Vyākaraṇamabābhāṣya (Kielhorn, 2nd ed., 1892) Vol. 1. p. 1, line 14 to p. 5, line 11; Vol. 1. p. 7, line 26 to p. 11, line 14.
21. Bṛhaddevatā V. 50-81.
22. Śābarabhāṣya I. ii. 31-53.

Paper VII.—

Unseen and Essay.

FOR THE M. A. EXAMINATION.

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[Questions bearing on the history of the Śāstra shall be included in the second paper on that Śāstra i.e., the ordinary Paper VI.]

Subordinate.

Paper I.—

Unseen passages for translation and composition.

Paper II.—

Select Texts :

1. Atharva Veda, Sūktas :—I. 1, 32; II. 1; III. 4, 12, 30; IV. 16, 31; V. 2, 11, 13, 18, 20, 22; VI. 8, 27, 46, 50, 120; VII. 1, 12 (=S. P. P. 13); IX. 2; X. 2; XI. 5 (=S. P. P. 7); XII. 1. 1-10; XV. 13; XIX. 49, 53; XX. 127.

2. Taittirīya and Śvetāśvatara Upaniṣads.
3. Āpastamba Gr̥hyasūtra.
4. Bhāratacampu, Stabakas 1-4.

Additional for Principal.

Paper III.—

The origin and growth of the language:

The following books are *prescribed* :—

1. Nirukta, Adhyāyas I, II, IV.
2. Ṛgveda Prātiśākhya, Paṭala I.
3. R. G. Bhandarkar's Wilson Philological Lectures, I-III, and VII.
4. Gune's Introduction to Comparative Philology.
5. L. Bloomfield's Introduction to the Study of Language.

The following books are *recommended* :—

- Woolner : Introduction to Prākṛt.
 Bloch : La formation de la langue Marathe.
 Divatia : Gujarati Language and Literature.
 Brugmann : Kurze vergleichende Grammatik der indogermanischen Sprachen.
 Meillet, Introduction de la grammair comparée.

Paper IV.—Veda.

(a) Sāyaṇa's Introduction to Ṛgveda-Bhāṣya.

(b) Ṛgveda.—The following sūktas :

- I. 1, 2, 20, 24, 38, 53, 62, 65, 87, 92, 95, 105, 112, 113, 114, 120, 142, 146, 157, 161, 185, 187, 191 ; II. 1, 15, 22, 24, 34, 39, 43 ; III. 8, 26, 29, 48, 53, 58 ; IV. 5, 18, 24, 26, 27, 38, 40, 53 ; V. 3, 28, 31, 37, 62, 84, 85 ; VI. 9, 27, 61 ; VII. 17, 19, 33, 56, 100 ; VIII. 46, 91, 101 ; IX. 3, 32, 85, 90, 112, 113 ; X. 16, 18, 34, 71, 117, 129, 145, 146.

Papers V and VI.—

Any *one* of the following ten Śāstras :

1. Vyākaraṇaśāstra :—

Paper V.—

- (a) Siddhānta-Kaumudī (omitting the Unādi and the Phīṭ sūtras).
- (b) Paribhāṣenduśekhara of Nāgojibhaṭṭa.
- (c) Vyākaraṇa-Mahābhāṣya of Patañjali—I. i. āhnikas 1-4, II. i. āhnika 1, and II. ii. āhnika 2.

Paper VI.—

- (a) Śikṣā of Pāṇini.
 - (b) Vākyapadīya of Hari, with commentary, first Kāṇḍa (*i.e.*, pages 1-62, Benares edition).
 - (c) Vaiyākaraṇasiddhāntakārikā with commentary (Ānandāśrama San. Ser., No. 43).
 - (d) Dr. S. K. Belvalkar : Systems of Sanskrit Grammar.
2. Alamkāraśāstra :—

Paper V.—

- (a) Daṇḍin's Kāvyaadarśa.
- (b) Mammaṭa's Kāvyaaprakāśa, Ullāsas IV-VIII.
- (c) Dhvanyāloka with Ālocana.
- (d) Rasagangādhara, from Upamā to the end.

Paper VI.—

- (a) Bharata's Nāṭyaśāstra, Chapters VI, VII, XVI and XVIII-XX.
- (b) Kāvya-mīmāṃsā of Rājaśekhara.
- (c) Udbhaṭa's Kāvya-lamkārasārasamgraha.
- (d) History of Sanskrit Poetics, as in Dr. De's History of Sanskrit Poetics ; or Mr. Kane's History of Alamkāra Literature.

3. Nyāya-Vaiśeṣikā :—

Paper V.—

- (a) Nyāyasūtras with Vātsyāyanabhāṣya.
- (b) Vaiśeṣikasūtra with Praśastapādabhāṣya.
- (c) Siddhāntamuktāvali.

Paper VI.—

- (a) Nyāyabindu of Dharmakīrti.
- (b) Nyāyavārtika of Uddyotakara.
- (c) Māṇikyanandi : Parīkṣāmukhasūtra (text only).
- (d) History of Nyāya-Vaiśeṣika as in Keith's "Indian Logic and Atomism" or Dr. Satish Chandra Vidyabhushana's "History of Indian Logic."

4. Dharmaśāstra :—

Paper V.—

- (a) Āpastamba-dharmasūtra.
- (b) Yājñavalkyasmṛti with Mitākṣarā and Viśvarūpa on Ācāra and Vyavahāra.
- (c) Vyavahāramayūkha.
- (d) Nārada-smṛti.

Paper VI.—

- (a) Nirṇayasindhu.
- (b) Arthasamgraha.
- (c) Vīramitrodaya, Vyavahāra.
- (d) History of Dharmaśāstra as in Jolly's Recht und Sitte, or Mr. Kane's History of Dharmaśāstra, or similar book ; and Sarkar's "Mīmāṃsā Rules of Interpretation."

5. Mīmāṃsāśāstra :—

Paper V.—

- (a) Mīmāṃsāsūtras with Śābarabhāṣya, Ch. I-IV.
- (b) Kumārila's Tantravārtika, Ch. I.
- (c) Mīmāṃsānyāyaprakāśa.

Paper VI.—

- (a) Śāstradīpikā, I. 1.
- (b) Prakaraṇapañcikā, Prakaraṇas 1-9.
- (c) History of the Śāstra as in Dr. Jha's " Prabhākara School."

6. Sāṃkhya-Yoga :—

Paper V.—

- (a) Sāṃkhyakārikās with Vācaspati's Tattvakaumudī.
- (b) Sāṃkhyasūtras with Vijñānabhikṣu's Pravacanabhāṣya.

- (c) Sāmkhya Philosophy as found in the Śāntiparvan of the Mahābhārata.
- (d) History of Sāmkhya-Yoga as in Garbe's Die Samkhya Philosophie, and Samkhya und Yoga.

Paper VI.—

- (a) Yogasūtra with Vyāsabhāṣya and Vācaspati's commentary.
- (b) Vijñānabhikṣu's Yogabhāṣyavārtika.
- (c) Bhoja's Yogśāstravṛtti.
- (d) Yogāvacāra's Manual (Pali Text Society).

7. Vedāntaśāstra :—

Paper V.—

- (a) Gauḍapāḍakārikās on the Māṇḍūkyaopaniṣad.
- (b) Śankara's Śārīrakabhāṣya on the Brahmasūtras.
- (c) Madhusūdanasarasvatī's Siddhāntabindu.

Paper VI.—

- (a) Rāmānuja's Śrībhāṣya on the Vedāntasūtra, I. i. 1.
- (b) Vallabha's Anubhāṣya.

or

- Madhvabhāṣya with Jayatirtha's Prakāśikā.
- (c) V. S. Bhate's "The Vedant."

[N. B.—For the additional paper for the Zala Vedanta Prize the same books are prescribed as for Vedanta, Paper V.]

8. Jain Philosophy :—

Paper V.—

- (a) Umāsvāti : Tattvārthādhigamasūtra with Ślokavārtika.
- (b) Malliṣeṇa : Syādvādamanjarī.

Paper VI.—

- (a) Pancādhyāyī (Granthapraksh Karyalaya, Indore).
- (b) Candraprabhācārya : Prameyakamalamārtaṇḍa.

[N. B.—Candidates are expected to show general knowledge of the origin and growth of Jain religion and philosophy.]

9. Buddhist Philosophy :—

Paper V.—

- (a) Dighanikāya : Brahmajālasutta, Sāmannaphalasutta, Mahāsatipatṭhānasutta, and Tevijjasutta.
- (b) Yaśomitra : Abhidharmakośavyākhyā (First Kośasthāna only).
- (c) Dharamakīrti : Nyāyabindu, with the commentary of Dharmottara.

Paper VI.—

- (a) Nāgārjuna : Mūlamadhyamakāsūtras with the commentary of Candrakīrti.
- (b) Śāntideva : Bodhicāryāvatāra, 9th chapter only, with the Panjikā of Prajñākaramati.
- (c) Brahmasūtrabhāṣya of Śankara II. ii. 18-32, with the Bhāmatī of Vācaspatimitra on the same.
- (d) History of Buddhism as in Yamakami's "Systems of Buddhist Thought," Grimm's "The Doctrine of the Buddha," Keith's "Buddhist Philosophy of India and Ceylon," and L. de la Vallée Poussin's "Nirvāṇa."

10. Palæography :—

Paper V.—

- (a) Inscriptions of Aśoka (Corpus Inscriptionum Indicarum, Vol. 1, 2nd Edition).
- (b) Cave Inscriptions : (i) Udayagiri Caves in Orissa, and (ii) Caves of Western India (Fergusson and Burgess : Cave Temples of India ; and Archæological Survey of Western India, Vol. IV).
- (c) Inscriptions of Kṣatrapa Princes (Epigraphia Indica, Vol. VIII).
- (d) Inscriptions of the Early Guptas (Gorpus Inscriptionum Indicarum, Vol. III).

Paper VI.—

- (a) Bühler's Indian Palæography.
- (b) Prācīnalekhamālā, Parts I-IV, (Kāvya-mālā Series).
- (c) History of Ancient India upto 800 A. D. as in Vincent Smith's Early History of India.

1932 and 1933.

Subordinate.

Paper I—Unseen passages for translation from and into Sanskrit and composition in Sanskrit.

Paper II—Select Texts :—

1. Kaṭha and Taittirīya Upaniṣads.
2. Āśvalāyana Gr̥hyasūtra.
3. Rāmāyaṇa—Ayodhyā Kāṇḍa.
4. Daṇḍin—Daśakumāracarita.

Recommended : Portions bearing on the texts from Winternitz's History of Sanskrit Literature, Vol. I and Keith's History of Sanskrit Literature.

Additional for Principal.

Paper III—The origin and growth of the language :

The following books are *prescribed* :—

1. The Nirukta, Adhyāyas I, II, IV.
2. Ṛgveda Prātiśākhya, Paṭala I.
3. R. G. Bhandarkar's Wilson Philoligical Lectures, I-III and VII.
4. Gune's Introduction to Comparative Philology.

The following books are *recommended* :—

1. Woolner : Introduction to Prākṛt.
2. Bloch : La formation de la language Marathe.
3. Divatia : Gujarati Language and Literature.
4. Brugmann : Kurze Vergleichende Grammatik der indogermanischen Sprachen.
5. Meillet : Introduction de la grammaire comparée.

Paper IV—Veda :

- (a) Sāyaṇa's Introduction to Ṛgveda-Bhāṣya.
- (b) Ṛgveda—VIIth Maṇḍala.

[Questions bearing on the history of the Śāstra shall be included in the Second Paper of that Śāstra, i.e., the ordinary Paper VI.]

Papers V and VI—Any *one* of the following ten Śāstras :

1. Vyākaraṇaśāstra :

Paper V—

- (a) Siddhāntakaumudī (omitting the Uṇādi and the Pīṭ sūtras).
- (b) Vyākaraṇa--Mahābhāṣya of Patañjali—I. i. i. ahnikas 1—4, II. i ahnika 1, and II. ii, ahnika 2.

Paper VI—

- (a) Śikṣā of Pāṇini.
- (b) Vākyapadīya of Hari, with commentary, first Kāṇḍa (*i. e.* pages 1—62 Benares edition).
- (c) Paribhāṣenduśekhara of Nāgojibhaṭṭa.

Recommended :

Dr. S. K. Belvalkar : Systems of Sanskrit Grammar.

2. Alamkāraśāstra :

Paper V—

- (a) Mammaṭa's Kāvya-prakāśa, Ullāsas IV-VIII.
- (b) Dhvanyāloka with Ālocana.
- (c) Rasagaṅgādhara, from Upamā to the end.

Paper VI—

- (a) Bharata's Nāṭyaśāstra, Chapters VI, VII, XVI and XVIII-XX.
- (b) Kāvya-mīmāṃsā of Rājaśekhara.

Recommended :

History of Sanskrit Poetics, as in Dr. De's History of Sanskrit Poetics ; or Mr. Kane's History of Alamkāra Literature.

3. Nyāya-Vaiśeṣika :

Paper V—

- (a) Nyāyasūtras with Vātsyāyanabhāṣya.
- (b) Vaiśeṣikasūtras with Praśastapādabhāṣya.

Paper VI—

- (a) Nyāyabindu of Dharmakīrti.
- (b) Siddhāntamuktāvali.
- (c) Māṇikyanandi : Parīkṣāmukhasūtra (text only).

Recommended :

History of Nyāya-Vaiśeṣika as in Keith's Indian Logic and Atomism ; or Dr. Satish Chandra Vidyabhushana's History of Indian Logic.

4. Dharmaśāstra :

Paper V—

- (a) Āpastamba-dharmasūtra.
- (b) Yājñavalkyasmṛti with Mitākṣarā.
- (c) Nārada-smṛti.

Paper VI—

- (a) Vyavahāramayūkha.
- (b) Vīramitrodaya, Vyavahāra.

Recommended :

History of Dharmaśāstra as in Jolly's *Recht and Sitte*, or Mr. Kane's *History of Dharmaśāstra*, or similar book ; and Sarkar's *Mīmāṃsa Rules of Interpretation*.

5. Mīmāṃsāśāstra :

Paper V—

- (a) Śabarabhāṣya, Ch. I-IV.
- (b) Kumārila's *Tantravārtika*, Ch. I.
- (c) *Mīmāṃsānyāyaprakāśa*.

Paper VI—

- (a) Śāstradīpikā, I. 1.
- (b) *Prakaraṇapañcikā*, *Prakaraṇas* 1-9.

Recommended :

History of the Śāstra as in Dr. Jha's *Prabhākara School*.

6. Sāṃkhya Yoga :

Paper V—

- (a) *Sāṃkhyakārikās* with Vācaspati's *Tattvakaumudī*.
- (b) *Sāṃkhyasūtras* with Vijñānabhikṣu's *Pravacanabhāṣya*.
- (c) *Sāṃkhya Philosophy* as found in the Śāntiparvan of the *Mahābhārata*.

Paper VI—

- (a) *Yogasūtra* with Vyāsabhāṣya and Vācaspati's commentary.
- (b) Vijñānabhikṣu's *Yogabhāṣyavārtika*.
- (c) *Yogāvacāra's Manual* (Pali Text Society).

Recommended :

History of *Sāṃkhya-Yoga* as in Garbe's *Die Samkhya Philosophie*, and *Sāṃkhya und Yoga*.

7. Vedāntaśāstra :

Paper V—

- (a) *Gauḍapāḍakarikās* on the *Māṇḍukyopaniṣad*.
- (b) Śaṅkara's *Śārīrakabhāṣya* on the *Brahmasūtras*.

Paper VI—

- (a) Rāmānuja's *Śrībhāṣya* on the *Vedāntasūtra*, I, i. 1.
- (b) Vallabha's *Aṇubhāṣya*.

or

Madhvabhāṣya with Jayatīrtha's *Prakāśikā*.

Recommended :

Dr. V. S. Ghate's *The Vedānta*.

[N. B.—For the additional paper for the Zala Vedanta Prize, Śaṅkara's *Śārīrakabhāṣya* on the *Brahmasūtras* and Madhusūdanasaravati's *Siddhānta-bindu* are prescribed.]

8. Jain Philosophy ;

Paper V—

- (a) Umāsvāti : *Tattvārthādhigamasūtra* with his *Bhāṣya*.
- (b) Malliṣeṇa : *Syādvādamāñjarī*.

Paper VI—

(a) Pañcādhyāyī (Granthaparakāśa Kāryālaya, Indore).

(b) Candraprabhācārya : Prameyakamalamārtaṇḍa.

[N. B.—Candidates are expected to show general knowledge of the origin and growth of Jain religion and Philosophy.]

9. Buddhist Philosophy :

Paper V—

(a) Dīghanikāya : Brahmajālasutta, Sāmannaphalasutta, Mahāsati-
paṭṭhanasutta and Tevijjasutta.

(b) Yaśomitra : Abhidharmakosavyākhyā (First Kosasthāna only).

(c) Dharmakīrti : Nyāyabindu, with the commentary of Dharmottara.

Paper VI—

(a) Nāgārjuna : Mūlamādhyamakasūtras with the commentary of Candra-
kīrti up to the end of the fourteenth Chapter, *i. e.*, the end of
Saṃsarga Parīkṣā.(b) Śāntideva : Bodhicāryāvatāra, 9th chapter only, with the Pañjikā
of Prajñākaramati.

(c) Brahmasūtrabhāṣya of Śaṅkara, II. ii. 18-32.

*Recommended :*History of Buddhism as in Yamakami's Systems of Buddhistic Thought,
Grimm's The Doctrine of the Buddha, Keith's Buddhist Philosophy of
India and Ceylon, and L. de la Vallée Poussin's Nirvāṇa.

10. Palæography :

Paper V—

(a) Inscription of Aśoka (Corpus Inscriptionum Indicarum, Vol. 1, 2nd
Edition).(b) Cave Inscriptions : (i) Udayagiri Caves in Orissa, and (ii) Caves of
Western India (Fergusson and Burgess : Cave Temples of India ;
and Archæological Survey of Western India, Vol. IV).

(c) Inscriptions of Kṣatrapa Princes (Epigraphia Indica, Vol. VIII).

(d) Inscriptions of the Early Guptas (Corpus Inscriptionum Indicarum,
Vol. III).

Paper VI—

(a) Bühler's Indian Palæography.

(b) Prācīnalekhamālā, Parts I-IV, (Kāvya-mālā Series).

*Recommended :*History of Ancient India upto 800 A.D. as in Vincent Smith's Early History of
India.

Rapson—Cambridge History of India, Vol. I.

CHAPTER XII.—PALI.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Jātaka Tales (Fausboll's Ed.), Nos. 3, 7, 9, 12, 21, 407, 461, 485, 499, 514
and 523.
2. Dhammapada : Text as in P. T. S. Edition.

3. Khuddaka Pāṭha : Text as in P. T. S. Edition.

1932

1. Jātakatthakathā-Nidānakathā, Dewanagāri Edition by D. Kosambi, Selections 72-158 (both inclusive).
2. and 3. As in 1931.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

[A general knowledge of the Life and Work of the Buddha will be required.]

1931

1. Majjhima Nikāya (Mūla Pannāsaka) Suttas Nos. 26, 27, 29, 30, 31, 32, 35, 39, 41, 44, 49, and 50.
2. Cariyā Piṭaka—Text as in P. T. S. Edition by Morris, (a detailed study of the Jātaka Tales in the Cariyā Piṭaka will be required).
3. Buddhaghosuppati— Edited by Gray.

1932

1. Majjhima Nikāya (Mūla Pannāsaka) Suttas Nos. 2, 3, 4, 7, 12, 14, 15, 19, 20, 21, 22 and 24.
- 2 and 3 As in 1931.

FOR THE B. A. EXAMINATION.

Pass Course.

[N. B.—Rhys Davids *Buddhist India* is recommended for general knowledge of Buddhistic India and Buddhism.

Translation into Devanāgarī of a Pāli passage either in the Singhalese or in the Burmese script, at the student's option, is expected in Paper I.]

1931*

(In *supersession* of those published on pages 549-550 of the University Handbook for 1928-29.)

Pass Course.

Paper I.—

1. Dīgha Nikāya, Vol. I.
2. Thera Gāthā.

Paper II.—

1. Sutta Nipāta.
2. Anguttara (Pancaka Nipāta, pp. 1-136 of P. T. S. ed.)

Paper III.—

1. Milinda (Introduction and Ubhayakoṭika Panha).

Paper IV.—

Divyāvadāna. I-XVI.

Additional for Honours Course.

Paper V.—

1. Mahāvamsa (whole), Geiger's ed.
2. Sāsnavamsa (Pali Text Society ed.)

* Honours candidates offering two languages, viz., Pali and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must choose Papers I and II.

Paper VI.—

Abhidhammatha Saṃgaha with Commentary, I-V

Paper VII.—

1. Unseens.
2. Essay.

1932*

Pass Course.

Paper I.—

1. Dīgha Nikāya, Vol. II.
2. Thera Gāthā.

Paper II. } As in 1931.
Paper III. }

Paper IV.—

Divyāvadāna, XVII-XXVII.

Additional for Honours Course.

Paper V.—

As in 1931.

Paper VI.—

Kathāvatthu, I-V.

Paper VII.—

As in 1931.

FOR THE M. A. EXAMINATION.

[N. B.—The following books are recommended for general knowledge :—

- Oldenberg—The Buddha.
H. Kern—Manual of Indian Buddhism.
A. Coomaraswamy—Buddha, his Religion.]

1931, 1932 and 1933

Subordinate.

Paper I.—

Unseen passages for translation and composition. Pali passages may be set, at the student's option, either in the Singhalese or the Burmese.

Paper II.—

Select Texts from Pali Literature :—

- (a) 1. The Anguttara Nikāya—Catukka Nipāta.
2. The Mahāvagga, Khandhakas I, VI and VIII (Oldenberg's Edition).
3. The Itivuttaka and Udāna.
4. The Jātaka Selections (Edition by Fausboll) Jātakas Nos. 1, 2, 3, 4, 5, 6, 7, 457, 480, 482, 499, 506, and 524.

* Honours candidates offering two languages, viz., Pali and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must choose Papers I and II.

5. The Sumangala Vilāsinī—Part I (P. T. S.) pages 132 to 308 (containing Buddhaghosa's commentary on the Sāmanā, Ambaṭṭha and Kūṭadantas Suttantas).
 6. Mahā Kassapa Caritam, Cantos 1-10, Vidurupola Piyatissa, Colombo.
- (b) The following works are recommended for the study of the Pali Buddhist Literature :—
1. Rhys Davids—Buddhist India (Story of Nations Series).
 2. Winternitz—Geschichte der Indischen Litteratur, II, 1: Die Buddhistische Litteratur.
 3. Geiger—Pali Litteratur and Sprache (Encyclopædia of Indo-Aryan Research 1, 7).

Additional for Principal.

Paper III.—

The following are recommended :—

1. The practical grammar of the Pali Language—Duroiselle.
2. A simplified grammar of the Pali Language—E. Muller.
3. Introduction to comparative Philology—Gune (Chaps. I, III-V).
4. Wilson Pihlological Lectures—Bhandarkar (Chaps. I-III, VII).
5. Sadda Nīti—Aggavamsa.
6. Evolution of Māgadhi—A. B. Sāstri (1922),
7. Bharhut Inscriptions—Barua and Sinha (1926).
8. Aśoka's Inscriptions—Intended for Linguistic Study only.
9. Pali and Sanskrit—R. O. Franke.
10. Introduction to Prakṛits—Woolner.

Paper IV.—

The Older Nikāyas.

1. The Dīgha and the Majjhima Selections.
 - (a) The Dīgha Nikāya (P. T. S.) Suttas Nos. I, II, III, IV, V, IX, XI, XIII, XIV, XV, XVI, XVII, XIX, XXI, XXII, XXIII, XXIV, XXVII, XXXI and XXXII.
 - (b) The Majjhima Nikāya (P. T. S.) Suttas Nos. 12, 13, 15, 19, 20, 21, 22, 24, 26, 27, 31, 32, 36, 38, 41, 49, 55, 56, 60, 61, 63, 71, 72, 76, 80, 81, 82, 84, 90, 93, 96, 98, 101, 104, 107, 110, 114, 116, 117, 121, 123, 128, 130, 141, 142 and 151.
2. Bāhira Nidāna Vaṇṇanā, Samanta Pāsādikā—Buddhaghosa.
3. The Buddha—Oldenberg.

Paper V.—

The Abhidhamma or Psychological Ethics.

1. The Dhammasamgaṇi.
2. The Aṭṭhasālini—Buddhaghosa.
3. The Yamaka, Chapters I-V (both inclusive) (from Mūla Yamaka to the end of Sacca Yamaka.)

Paper VI.—

The Abhidhamma—continued.

1. Visuddhimagga, Buddhaghosa Vol. II, Chapters XIV to XXIII (both inclusive), from Khandha Niddesa to the end of Pannābhāvanānisamsa).
2. Abhidharmakosa vyākhyā, Ed. S. Levi and Stcherbatsky.
3. The Kathāvatthu Vol. I (P. T. S.) Vaggas I to V (both inclusive).
4. The Paṭisambhidhā Magga—Chapters I and II (Nāṇkathā and Dīṭṭhi Kathā).

CHAPTER XIII.—ARDHA-MAGADHI.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931

1. Prākṛtakathāsamgraha, stories 1, 2, 3 and 5.
2. Kummāputtacariya (Benares ed.)
3. Prākṛt Grammar—Sandhi rules, Declension and Conjugation (as in Prākṛtalakṣaṇa of Caṇḍa of Prākṛtaprakāśa of Vararuci or some similar book.)

1932

1. Prākṛtakathāsamgraha, stories 5, 6, 7.
2. As in 1931.
3. Prākṛt Grammar as in 1931.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Rāyapaseṇīyasutta from page 113 to end (Agamodayasamiti edition).
2. Daśavaikālikasūtra, Adhyāyanas 6 to end.
3. Ardha-Māgadhī Grammar, as in Hemacandra, Adhyāya VIII, Pādas 1 to 3 or any similar book.

1932

1. Daśavaikālikasūtra, Adhyāyanas 1 to 6.
2. Aupapatikasūtra (Sūtras 1-32), Leumann's edition.
3. Grammar as in 1931.

FOR THE B. A. EXAMINATION.

1931

Pass Course.

Paper I—

1. Uvāsagadasāo.
2. General knowledge of Jainism as in Jaini and Bühler.

Paper II—

1. Grammar of Prākṛts other than Ardha-Māgadhi as in Hemachandra VIII, pāda (iv) or any similar book.
2. S'ūdraka—Mṛcchakaṭika (to be read with special attention to the Prākṛts).
3. Kālidāsa—Vikramorvaśīya including all the Prākṛt verses in Act IV as given in the different editions, (to be read with special attention to the Prākṛts).

Paper III—

Nandisūtra (whole.)

Paper IV—

Kumārapālpratibodha, Prastāva V.

Additional for Honours Course.*

Paper V—

Ācārāṅgasūtra.

Paper VI—

1. Uttarajjjhayaṇasutta, Adhyayanas 1 to 23.
2. Gauḍavaho, verses 202 to 417.

Paper VII—

Essay and Unseen passages from the Prākṛts into English and from English into Ardha-Māgadhi.

1932

Pass Course.

Paper I—

As in 1931.

Paper II—

- (a) Grammar of Prākṛts other than Ardha-Māgadhi as in Hemacandra VIII, Pāda 4, or any similar book.
- (b) Rājaśekhara-Karpûramanjarī.

Paper III—

As in 1931.

Paper IV—

Supāsanāhacariya, pages 1-101.

Additional for Honours Course.

Paper V—

Sūtrakritāṅga.

Paper VI—

As in 1931.

Paper VII—

As in 1931.

*Honours candidates offering two languages, viz., Ardha-Māgadhi and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must choose Papers I and II.

FOR THE M. A. EXAMINATION.
1931

Subordinate.

Paper I—

1. Unseen passages for translation and composition.

Paper II—

1. Inscriptional Prākṛt :—
 - (a) Aśoka Inscriptions : Kalsi and Shahbazgarhi versions of the first three rock edicts.
 - (b) Prākṛt Dhammapada (Calcutta University Press).
2. Nāyādhammakahā, Book IX.
3. Vajjālagga, verses 1 to 300.
4. Surasundarīkahā, Chapter 1.
5. Mohaparājaya.

Recommended.—

History of Jain Literature as in Weber's Sacred Literature of the Jainas or
Winternitz's Geschichteder indischen litteratur, Book II.

Additional for Principal.

Paper III—

Origin and Growth of Language :

1. Pischel : Grammatik der Prakrit Sprachen.
2. Dr. Bhandarkar : Wilson Philological Lectures, I-III and VII.
3. Dr. Gune : Introduction to Comparative Philology. Chapters I, IV-VI.
4. Woolner : Introduction to Prakrit.

Paper IV—

The Agama Literature :

1. Bhagavatī Sūtra, Books I-III.
2. Praśnavyākaraṇa Sūtra (whole).

Paper V—

Jain Philosophy in Prākṛt :

1. Viśeṣāvaśyakabhāṣya from beginning to the end of Kramaprayojanadvāra i.e. śloka 1 to 916.
2. Pravacanasāra.

Paper VI—

Jain Philosophy in Sanskrit :

1. Umāsvāti : Tattvārthādhigamasūtra with Sarvārthasiddhi and Bhāṣyānuśārīṇī of Siddhasenasūri.
2. Malliṣeṇa : Syādvādamanjarī.
3. Gommsaṭasāra (Jīva Kāṇḍa only).

1932 and 1933

Subordinate.

Paper I—

Unseen passages for translation from Prakrits into English and from English into Ardha-Māgadhi and composition in Ardha-Māgadhi.

Paper II—

Select texts :—

1. Nāyādhammakahā, Adhyayana 2nd.
2. Surasundarīcariya, Pariccheda 2nd.

3. Vajjālagga (Bibliotheca Indica), stanzas 579 to 795.
4. Mohaparājaya by Yaśahpāla.
5. Setubandha by Pravarasena, Āśvāsakas 1 and 2.

Additional for Principal.

Paper III—

The origin and growth of the language—

1. Bhandarkar : Wilson Philological Lectures I to III, and VII.
2. Gune : Introduction to Comparative Philology, Chapters I and IV to VI.
3. Woolner : Introduction to Prakrit.
4. Divatia : Wilson Philological Lectures.

Typical texts recommended for linguistic study—

1. Inscriptions of Aśoka (all versions), Edicts 4 to 6.
2. Kharavela Inscription.
3. Bhavasayaṭṭakabhā by Dhanapāla, Sandhi First.
4. Chārudatta by Bhāsa.

Recommended :—

Pischel's Grammatik der Prakrit Sprachen.

Paper IV—

The Āgama Literature.

1. Bhagawatī Sūtra, Satakas 1-3.
2. Sthānāngasūtra Uttarabhāga, *i.e.*, Adhyayanas or Sthānas 5 to 10 (both included).

Paper V—

Philosophical Literature.

1. Viśeṣāvaśyaka*bhāṣya Ganadharavāda (*i.e.* gāthās 1549 to 2024 Āgamodaya-samiti text) and Nayadvāra (*i.e.* Stanzas 2180 to 2285 of Āgamodayasamiti text).
2. Pravacanasāra by Kundakundācārya.

Paper VI—

1. Tattvārthādhigamasūtra by Umāsvāti with his Bhāṣya and commentary Sarvārthasiddhi of Pūjyapādācārya.
2. Syādvādamāñjarī by Malliṣeṇa.
3. Āptaparīkṣā by Vidyānandī.

CHAPTER XIV.—AVESTA AND PAHLAVI.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

Avesta—Hāvan Gāh, Khorshed Yasht and Hormazd Yasht. §§ 1 to 8.

Pahlavi—Mainūg-i-Khrad (Dastur Darab Sanjana's edition), Chapters XXXII to L.

1932

1. Avesta.—Yasna Hā XII. 8-9 ; Yasna Hā LXII. 1-10 ; Yasna Hā LXV. 1-6 ; Yasht X. 4-6 and 144-146 ; Ushahina Gāh.
2. Pahlavi.—Mainūg-i-Khrad (Dastur Dr. Darab Sanjana's edition), Chapters XXXII—L.

1933

1. Avesta.—Yasna Hā XII. 8-9 ; Yasna Hā LXII. 1-10 ; Yasna Hā LXV. 1-6 ; Yasht X. 4-6 and 144-146 ; Ushahina Gāh.

2. Pahlavi.—Kárnámak-ī Artakhshīr Pápakán (Dastur Dr. Darab P. Sanjana's edition) Chapters I-VI.

1934

1. Avesta.—Five Gáhs ; Yasna Há XII. 8-9.
2. Pahlavi.—Kárnámak-ī Artakhshīr Pápakán (Dastur Dr. Darab P. Sanjana's edition) Chapters I-VI.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931

1. Avesta.—Yashts Hormazd (Sects. 9 to end), Âbân and Tīr.
2. Pahlvai.—Shâyast, lâ-Shâyast, Chapters I and II. (Dr. M. B. Davar's edition.)

1932

1. Avesta.—Yasna Hás LIV.—LXXII.
2. Pahlavi.—Sháyast, lá-Sháyast, Chapters I and II. (Dr. M. B. Davar's edition).

1933

1. Avesta.—Yasna Hás LIV—LXXII.
2. Pahlavi.—Ganj-e Sháfgán §§ 121 to end.

1934

1. Avesta.—Yashts Ābân and Tīr.
2. Pahlavi.—Ganj-e Sháfgán §§ 121 to end.

FOR THE B. A. EXAMINATION.

1931

Pass Course.

Paper I—

Avesta Gáthás, Hymns *Ahyá Yásá*, *Khshmaibyá Géus Urvá*, *At Tá Vakhshyá* and *Tá Ve Urvātá*.

Paper II—

Pahlavi Dīnkard Vol. XII (Dastur Dr. Darab Sanjana's edition).

Paper III—

Vendidād Fargards II-IV and XIX (Avesta and Pahlavi).

Paper IV—

Pahlavi Dádistán-ī-Dīnik, Pursishna I-XX.

Additional for Honours Course.

Paper V—

Avesta : Gáthás, Hymns *Ushtá Ahmāi*, *Tat Thwá Peresá*, *At Fravakhshyá* and *Kām nemoi Zām*.

Yashts : Meher, Sraoṣh Hādokht and Āstād.

Paper VI—

Pahlavi : Gáthás, Hymns prescribed in Paper V.
Manushchihar, Epistles II and III.

Paper VII—

Unseen passages from Avesta and Pahlavi into English and from English into Avesta and Pahlavi.

N. B.—Honours candidates taking two languages, *viz.*, Avesta and Pahlavi, and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must take Papers I and II.

1932

Pass Course.

Paper I—

Avesta : Gáthás, Hymns *Akhyáchá Khaetus*, *Yathá āis Ithá* and *Yá Shyaothná*.

Paper II—

Pahlavi, Dīnkard Vol. X (Book V only) (Dastur Dr. Darab Sanjana's edition).

Paper III—

Vendidád Fargards II-IV and XIX (Avesta and Pahlavi).

Paper IV—

Pahlavi Dádistán-ī-Dīnik, Pursishna I—XX.

Additional for Honours Course

Paper V—

Avesta : Gáthás, Hymns *Ushtá Ahmái*, *Tat Thwá Peresá*, *At Fravakhshyá* and *Kám Nemoi Zám*.

Yashts : Ābán, Tīr and Zamyát.

Paper VI—

Pahlavi : Gáthás, Hymns prescribed in Paper V.
Manushchihar, Epistle I.

Paper VII—

Unseen passages from Avesta and Pahlavi into English and from English into Avesta and Pahlavi.

N. B.—Honours candidates taking two languages, *viz.*, Avesta and Pahlavi, and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must take Papers I and II.

1933

Pass Course.

Paper I—

Avesta : Gáthás, Hymns *Akhyáchá Khaetus*, *Yathá āis Ithá* and *Yá Shya-othná*.

Paper II—

Pahlavi, Dīnkard Vol. X (Book V only). (Dastur Dr. Darab Sanjana's edition).

Paper III—

Vendidád Fargards V—VIII (Avesta and Pahlavi).

Paper IV—

Pahlavi Dádistán-ī-Dīnik, Pursishna XXI—XXXV.

Additional for Honours Course.**Paper V—**

Avesta : Gáthás, Hymns *Spent Mainyu*, *Yezi Adáís*, *At ma Yavá*, *Kat Moi Urvá*.

Yashts : *Ābán*, *Tīr*, *Zamyát*.

Paper VI—

Pahlavi : Gáthás, Hymns prescribed in Paper V.

Manushchihar, Epistle I.

Paper VII—

Unseen passages from Avesta and Pahlavi into English and from English into Avesta and Pahlavi.

N. B.—Honours candidates taking two languages, *viz.*, Avesta and Pahlavi, and an allied classical language or a Vernacular, may choose two papers in the allied language or the Vernacular in lieu of Papers III and IV. Pass candidates must take Papers I and II.

FOR THE M.A. EXAMINATION.**1931 and subsequent years.**

[*N. B.*—*Books Recommended*—Geldner's Avesta Literature : West's Pahlavi Literature ; Geiger's Civilization of the Eastern Iranians in Ancient Times and Zarathushtra in the Gathas ; Windischman's Zarathushtra in the Classics ; Jackson's Avesta Grammar in comparison with Sanskrit ; L. Bloomfield's Introduction to the Study of Language ; Casartelli's Philosophy of the Mazdayasnian Religion under the Sassanids ; Sturfevant's Linguistic Change ; Noeldeke's National Epic ; and Amerson's Comparative Grammar, Vol. I.]

1931**Subordinate.****Paper I—**

Unseen passages in Avesta and Pahlavi for Translation and Composition.

Paper II—

Avesta : Yasna, Hás 31, 35, 55 ; Yasht *Ābán* ; Vendidad 19.

Pahlavi : Vendidad 19 ; Dinkard Vol. XVIII (Dastur Darab P. Sanjana's edition) ; Dâdistân-î-Dînik, Pursishna 16 to 34 ; Westergaard's Bundahishn, Chaps. 1 to 5 ; Mânûshchîhar's Epistle 3.

Additional for Principal.**Paper III—**

A general account of the origin and growth of Avesta and Pahlavi, their linguistic character and their relation to other allied languages.

Paper IV—

Avesta and Pahlavi Gáthás, Hás 43 to 46 and 53.

Paper V—

The Behistun Inscriptions III and IV.

Avesta, Yasna Hás 28, 52 and 57 ; Yashts, Farvardin, Dîn and Arshtât ; Vendidad, 20, 21 and 22.

Paper VI—

The Pahlavi Inscriptions of Hâjiâbâd.

Dīnkard, Vols. 13 and 14, Book VII only. (Dastur Darab P. Sajana's edition).
 Shikand Gūmanik Vijar, Chaps. 1 to 5 (Pahlavi and Pazend).
 Nirangistān, the portion of Aerpatistān only.

1932

Subordinate.

Paper I—

Unseen passages in Avesta and Pahlavi for Translation and Composition.

Paper II—

Avesta : Yasna, Hās 29, 35 and 41.

Pahlavi : Vendidad Chaps. 1 and 2 ; Dīnkard, Vol. XIX (Dastur Darab P. Sanjana's edition); Dādīstān-i-Dīnik, Pursishna 1 to 15 ; Westergaard's Bundahishn, Chaps. 6 to 14 ; Mānūshchīhar's Epistle 2.

Additional for Principal.

Paper III—

A general account of the origin and growth of Avesta and Pahlavi, their linguistic character and their relation to other languages.

Paper IV—

Avesta and Pahlavi, Gāthās, Hās : 28 to 32.

Paper V—

The Behistun Inscriptions I and II.

Avesta : Yasna, Hās : 42, 67 and 70 ; Yashts, Ābān and Zamyād ; Vendidad 1, 2, 9 and 19.

Paper VI—

The Pahlavi Inscription of Hājiābād.

Dīnkard, Vol. XVII (Dastur Darab P. Sanjana's edition).

Pahlavi, Yasna, Hās 42, 67 and 70.

Pahlavi Mādīgān-i-Hazār Dādīstān, Facsimile edition with an introduction by Dr. J. J. Modi, page 1, line 17 (*Baba-i-tuisn*) to page 21, line 3 (*gitan nafsha*).

CHAPTER XV.—MARATHI.

FOR THE MATRICULATION EXAMINATION.

1931

Prose—

For detailed study :—

(1) "Vānmaya Vāṭikā" by Prof. S. N. Chaphekar.

For general study :—

(2) "Chandra-Gupta" by H. N. Apte.

Poetry—

For detailed study :—

(3) "Suvarṇa Sumane" by Prof. N. K. Bhagvat.

For general study :—

(4) "Phulānchī Mālā" by Prof L. G. Lele.

FOR THE B.A. EXAMINATION.

1931 and subsequent years.

[N.B.—Candidates are expected to possess an adequate knowledge of Marathi Grammar and of the elements of rhetoric (Alankara) and prosody ; also a knowledge of the outlines of the history of the Marāṭhī language and literature.]

The following text-books are recommended for the purpose :—

1. R. B. Joshi—Marāṭhī Bhāshechī Ghaṭanā : The first three sections ; (1923 Ed., pp. 1-214).
2. R. B. Joshi—Prauḍhabodha Vyākaraṇa.
3. Krishnashastri Chiplunkar—Marāṭhī Vyākaraṇāvaril Nibandha.
4. Krishnashastri Godbole—Marāṭhī Vyākaraṇa.
5. G. M. Gore—Alankāra Chandrikā.
6. D. V. Potdar—Marāṭhī Gadyāchā Ingrajī Avatāra.
7. V. L. Bhave—Mahārāshṭra Sārasvata.

Candidates will be expected to devote special attention to those portions only of the last work that bear on the subject matter of the books prescribed as texts.

1931

Prose—

- Agarkar—Nibandhasangraha, Part II (R. V. Phadtare and R. M. Thosar, Poona).
- V. K. Chiplunkar—'Itihāsa' and 'Lokabhrama' from the Nibandhamālā, Chitralshala Press, Poona).
- Kirloskar—Sangīta Saubhadra.
- S. M. Paranjpe—Mānājītrāv.
- H. N. Apte—Yeshwantrāo Khare.
- Mrs. Kashibai Kanitkar—Life of Dr. Anandibai Joshi. (Manoranjana Press, Bombay).

Poetry—

- Moropant—Ādiparva, first 18 Adhāyas (Ed. by Paradkar).
- Ramdas—Junā Dāsabodha (Ed. by Bhat & Co., Poona).
- Abhinavakāvya-mālā, Part I.
- Sāmarāja—Rukmiṇīharṇa.

1932

Prose—

Same as in 1931.

Poetry—

- Moropant, Ādiparva, from the 19th Adhyāya to the end (Ed. by Paradkar).
- Ekanātha—Rukmiṇiswayamvara.
- Raghunatha Pandita—Nalopākhyāna.
- Datta—"Dattānchī Kavītā" (D. K. Ghate)—(Ed. by V. D. Ghate).
- 'Vināyaka'—"Vināyakāchī Kavītā" (Ed. by D. A. Apte).
- 'Vividha Kāvya Mālā' (the Vol. of poems published by the Vividhajñāna Vistāra on the occasion of its Golden Jubilee).

1933

Books recommended for reference :—

- | | | | | |
|--------------------------------------|-----|-----|-----|-----------------|
| 1. Mahārāshṭra Sārasvata | ... | ... | ... | V. L. Bhave. |
| 2. Marāṭhī Bhāshechī Chaṭanā | ... | ... | ... | R. B. Joshi. |
| 3. Marāṭhī Gadyāchā Ingrajī Avatāra | ... | ... | ... | D. V. Potdar. |
| 4. Bhāshā Shāstra āṇi Marāṭhī Bhāshā | ... | ... | ... | K. P. Kulkarni. |
| 5. Alamkāra Chandrikā ... | ... | ... | ... | G. M. Gore. |
| 6. Shāstriya Marāṭhī Vyākaraṇa | ... | ... | ... | M. K. Damle. |

Candidates will be expected to devote special attention to those portions of the first three works that bear on the subject matter of the books prescribed as texts.

*Books recommended as texts :—**Prose :—*

- | | | | | |
|-------------------------------|-----|-----|-----|----------------|
| 1. Brāhmaṇa āṇi Tyānchi Vidyā | ... | ... | ... | M. S. Gole. |
| 2. Jaga he ase āhe ... | ... | ... | ... | H. N. Apte. |
| 3. Subhāshita āṇi Vinoda | ... | ... | ... | N. C. Kelkar. |
| 4. Totayāche Baṇḍa... | ... | ... | ... | N. C. Kelkar. |
| 5. Bhāvabandhana ... | ... | ... | ... | R. G. Gadkari. |

Poetry :—

Same as for 1932.

FOR THE M.A. EXAMINATION.

1931 and subsequent years.

Books and writings recommended for general scholarship, criticism and information :—

- (1) Wilson Philological Lectures (Latest edition)—R. G. Bhandarkar.
- (2) Wilson Philological Lectures (Arya Bhushan edition)—H. N. Apte.
- (3) Wilson Philological Lectures—W. B. Patwardhan (Fergusson College Quarterly).
- (4) Marāṭhī Chhanda (Saraswati Mandir)—V. K. Rajwade.
- (5) Introduction to the Dnyāneshwarī (Dhulia edition)—V. K. Rajwade.
- (6) Introduction to Comparative Philology by P. D. Gune.
- (7) Linguistic Survey of India, Vol. VII—Grierson.
- (8) Shastreeya Marāṭhī Vyākaraṇa—M. K. Damle.
- (9) Mahārāshṭra Sārasvata (Latest edition)—V. L. Bhave.
- (10) Marāṭhī Gadyāchā Ingrajī Avatāra—D. V. Potdar.
- (11) Vaidya yānche Nibandha āṇi Bhāshaṇen—C. V. Vaidya.
- (12) Prākṛt Bhāshechī Vichikitsā—R. R. Bhagwat.

[N. B.—For Prose and Poetry periods students are expected to study *in addition* to books recommended for general scholarship etc. Mahārāshṭra Sārasvata by V. L. Bhave and Marāṭhī Gadyāchā Ingrajī Avatāra by D. V. Potdar, so far as necessary for the periods concerned.]

1931

Subordinate.

Paper I—

No text-books are prescribed.

Paper II—

(a) *Prose* :—Texts—

Vividhadnyānavistāra, Jubilee Mahotsava—Nibandhāvali, Grantha I (published by Nadkarni and Mandali).

Dr. Bhandarkar—Dharmapar Vyākhyānen.

(b) *Poetry* :—Texts—

1. Kharesastri—Yashwantrāo-Mahākāvya.

2. Gadkari—Vāg-vaijayantī.

3. Abhinavakāvya-mālā, Part I.

(c) V. L. Bhawe—Mahārāshṭra Sārasvata (2nd and 3rd editions).
R. B. Joshi—Marāṭhī Bhāshechī Ghaṭanā, Parts 4 to 6.**Additional for Principal.**

Paper III—

Prose :—

Period—1875-1895.

Typical and illustrative texts (for detailed and intensive study) :—

1. V. K. Chiplunkar—Moropantāchī Kavita (from Nibandhamala).

2. G. G. Agarkar—Nibandhasangraha (Bhāga 1).

3. H. N. Apte—Madhlī Sthiti.

4. R. R. Bhagwat—Marāṭhyānsambandheen Chār Udgār.

Poetry—

Period—1740-1820.

Typical and illustrative texts (for detailed and intensive study) :—

Moropant—Udyogaparva.

Mahipati—Bhaktivijaya (chapters on Tukaram).

Niranjanamādhavāncha Kavitasangraha, Bhāga I—Pangarkar.

Anantaphandi—Kavita (Chitrashala edition, first 100 pages).

Paper IV.—

Recommended—

1. Wilson Philological Lectures V-VII—Bhandarkar.
2. Introduction to Philology—Gune. I, IV, V.
3. Dnyāneshwarāchen Vyākaraṇa—V. K. Rajwade.
4. Marāṭhī Bhāshechī Ghaṭanā—R. B. Joshi, chapters I to III.
5. Shāstreya Marāṭhī Vyākaraṇa—M. K. Damle.
6. Prākṛt Bhāshechī Vichikitsā—R. R. Bhagwat.
7. Formation of the Marāṭhī Language—J. Bloch.
8. Linguistic Survey of India, Vol. VII (1)—Grierson.
9. Introduction to Christian Purāṇa—Stephens.
10. Prākṛt Vyākaraṇa—Hemachandra,

Paper V—Texts—

1. Viṭṭhal—Rukmiṇī-Swayamvara.
2. Niloba—Gāthā.
3. Khare—Aitihāsika Lekha Sangraha, Bhāg 6.
4. Madhvamūneeshwar—*Paden* (published by Pangarker in Mumukshu).
5. Patwardhan : Harivanshāchī Bakhar, (ed. V. V. Khare).

Paper VI —

Essay. Typical Texts :—

1. S. M. Paranjpe—Sāhityasangraha, Bhāg I.
2. N. C. Kelkar—Lekhasangraha (Chitrashala edition, Parts I, II and III).
3. V. K. Rajwade—Introduction to Marāṭhyānchya Itihāsācheen Sādhanen, Khaṇḍa VI.
4. Vividhadnyānavistār, Jubilee Mahotsava Grantha Sangraha 2—Nibandha.

1932

Subordinate.

Paper I—

No text-books are prescribed.

Paper II—

*Books recommended as texts :**Prose—*

- | | | |
|-----------------------------------|-----|--------------------------------------|
| 1. Ingraji Bhāshā | } | from Nibandha Mālā—V. K. Chiplunkar. |
| 2. Doctor Johnson | | |
| 3. Prastāvanā (on Khaṇḍa 8th) ... | ... | ... V. K. Rajwade. |
| 4. Sudhāraṇā āṇi Pragati ... | ... | ... D. N. Apte. |

Poetry—

- | | | |
|--------------------------------------|-----|-----------------|
| 1. Tāmbyānchī Kavita, Parts 1 and 2. | | |
| 2. Arvāchīna Kavita, Pūrvārdha ... | ... | ... C. S. Gore. |

Books recommended for reference :

- | | | |
|----------------------------------|-----|------------------|
| 1. Mahārāshṭra Sārasvata ... | ... | ... V. L. Bhawe. |
| 2. Marāṭhī Bhāshechi Ghaṭanā ... | ... | ... R. B. Joshi. |

Additional for Principal.

Paper III—

Prose :—

Period 1775-1820. Typical and illustrative texts (for detailed and intensive study).

- | | | |
|---|-----|--|
| 1. Aitihāsika Lekha, Parts 1 and 2 ... | ... | ... V. V. Khare. |
| 2. Shivājīche Saptaprakaraṇātmaka Charitra ... | ... | Malhār Rāmarāva,
(Ed.) N. J. Kirtane. |
| 3. Khaṇḍa VIII (Marāṭhyānchyā Itihāsāchī Sādhanen). | ... | ... V. K. Rajwade. |

Poetry :—

Period 1820-1880. Typical and illustrative texts (for detailed and intensive study).

1. Rāmajoshikrit Kavita athavā Lāvanyā, Part II, edited by Shaligram.
2. Padyaratnāvali Krishnashastri
Chiplunkar.
3. Kusumāñjali V. M. Mahajani.
4. Indirā K. R. Kirtikar.

Paper IV—

As in 1931, with the omission of "Formation of the Marāṭhī Language, J. Bloch."

*Paper V—**Texts—*

1. Sabhā Parva... .. Mukteshwar.
2. Jñāneshwarī. Adhāyas, 16, 17 and 18 Jñāneshwar.
3. Abhangas—300 to 600, Tukārāmbuvachā Assala Gāthā, by V. L. Bhave, 1919.
4. Peshavyānchī Bakhara K. V. Sohoni.
5. Itihāsamanjarī D. V. Apte.

Paper VI—

Short Story (Laghu Kathā). Typical texts—

1. Pushpa Karaṇḍaka V. M. Joshi.
2. Kathā-saptaka Kolhatkar and Kelkar.
3. Samāja-Chitre Mrs. Girjibai Kelkar.
4. Jñānasindhu V. S. Gogate.

1933**Subordinate.***Paper I—*

No text-books are prescribed.

Paper II—

Books recommended as texts :—

Prose—

1. Ātma-Vidyā H. G. Godbole.
2. Abalonnatilekhamālā C. V. Vaidya.
3. Kāvya āṇi Kāvyaodaya W. B. Patwardhan.

Poetry—

1. Mādhavānujāchi Kavita K. H. Modak.
2. Rājā Shivājī M. M. Kunte.

- | | | | | |
|-------------------------------|-----|-----|-----|-----------------------------------|
| 3. Gangā-Varṇanā ... | ... | ... | ... | Chintamani Petkar. |
| 4. Kavana Guchhas 1 and 2 ... | ... | ... | ... | (Govindāgraja
Mandala, Dadar). |

Books recommended for reference.

- | | | | | |
|----------------------------------|-----|-----|-----|--------------|
| 1. Mahārāshṭra Sārasvata ... | ... | ... | ... | V. L. Bhawe. |
| 2. Marāṭhī Bhāshechī Ghaṭanā ... | ... | ... | ... | R. B. Joshi. |

Additional for Principal.**Paper III—***Prose :—*

Period 1821-1874. Typical and illustrative texts (for detailed and intensive study).

- | | | | | |
|---|-----|-----|-----|----------------------------------|
| 1. Bālamitra ... | ... | ... | ... | S. K. Chhatre. |
| 2. Ātma-Charitra (Vividhajñāna Vistāra) ... | ... | ... | ... | Dadoba Pandu-
rang. |
| 3. Uttarakāma Charita ... | ... | ... | ... | Parashurampant
Tatya Godbole. |
| 4. Mukta-mālā ... | ... | ... | ... | Lakshmanshastri
Halve. |

Poetry :—

Period 1880-1920. Typical and illustrative texts (for detailed and intensive study).

1. Tilakānchī Kavita, Part I.
2. Keshavasuta Yānchī Kavita.
3. Dāttānchī Kavita.
4. Vināyakānchī Kavita.
5. Mogaryāchī Phule, Guchhas 1 to 5.

Paper IV—

Same as in 1932.

Paper V—Texts.

- | | | | | |
|---|-----|-----|-----|--|
| 1. Jñāneshwarī, Adhyāyas 11, 12 and 13 | | | | |
| 2. Nilobāchī Gāthā ... | ... | ... | ... | Indira Press
Edition. |
| 3. Bhāusāhebānchī Bakhara ... | ... | ... | ... | K. N. Sane. |
| 4. Shivakālīna Patravayavahāra, Khaṇḍa 15 | | | ... | Edited by V. K.
Rajawade. |
| 5. Shishupāla-Vadha (Bhāskara) ... | ... | ... | ... | Thāna Marāṭhī
Grantha Sangrahālaya Edition. |
| 6. Aitihāsika Lekha Saṁgraha, Part 3 ... | ... | ... | ... | V. V. Khare. |

Paper VI—*Biography—*

- | | | | | |
|---|-----|-----|-----|-------------------|
| 1. Vishnu Shāstrī Chiplunkar Yānche Charitra | ... | ... | ... | L. K. Chiplunkar. |
| 2. Nyāyamūrti Rānade ... | ... | ... | ... | N. R. Phatak. |
| 3. Dr. Sir Rāmakrishṇa Gopāla Bhandarkar Yānche
Charitra ... | ... | ... | ... | S. N. Karnataki, |

CHAPTER XVI.—GUJARATI.
MATRICULATION EXAMINATION.
1931

Prose.—

Name of Author.	Part Selected.	Name of Book or Publication from which the part is selected.
(૧) નર્મદાશંકર	ગુજરાતીઓની સ્થિતિ, ભાગ-૨ જે	નર્મદાશંકરની પૃષ્ઠ ૭૮-૮૭. ગદ્યાત્મક ગ્રંથોનો સંગ્રહ— ભાગ ૧ લો. રા. સા. મહીપત- રામ રૂપરામવાળો (૧૯૨૪ ની આવૃત્તિ).
(૨) નવલરામ	નાટકશાળા ને ગોપીચંદ નાટક	નવલગ્રંથાવલિ, ભાગ ૨ જામાંથી.
(૩) મણિલાલ નલુભાઈ	પૂર્વ અને પશ્ચિમ	ગદ્યનવનીત, પૃષ્ઠ ૪૩૭ અથવા સુદર્શનગદ્યાવલી, પૃષ્ઠ ૪૮૭-૪૮૨.
(૪) ગોવર્ધનરામ ત્રિપાઠી	ધાસના બીડમાં પડેલો	સરસ્વતીચંદ્ર, ભાગ ૨ જામાંથી, પ્રકરણ ૩ જી.
(૫) નરસિંહરાવ દીવેટીઆ	મણિશંકર રત્નજી ભટ્ટ	સ્મરણમુકુરમાંથી.
(૬) રમણભાઈનીલકંઠ	સમાજજીવનમાં સ્વતંત્રતા: From: સંસારસુધારાની પ્રથમ ભાવના તે સ્વતંત્રતાની છે. To: સ્ત્રીને દેવી કહેવાનો ઘોષ કરવો અને તેને ધરમાં પુરી મૂકવાની કે ગજવામાં લઈ ફરવાની પૂતળી જેવી ગણવી એ કેવળ વ્યર્થ છે.	ગદ્યનવનીત પૃષ્ઠ ૧૮૦-૧૮૦, અથવા નડીઆદમાં બીજી સંસારસુધારા પરિષદના પ્રમુખસ્થાનેથી આપેલા ભાષણમાંથી, બુદ્ધિપ્રકાશ, પુ.૬૫. અંક ૧૧, પૃષ્ઠ ૩૨૨- ૩૨૬, નવેંબર, ૧૯૧૮.
(૭) આનંદશંકર ધ્રુવ	ગૌતમબુદ્ધનું જીવનચરિત્ર	ધર્મવર્ણનમાંથી.
(૮) રણજીતરામ વાવાભાઈ	ગુજરાતની એકતા From: કોઈ પણ પ્રજાનો ઇતિ- હાસ અને વર્તમાન સ્થિતિ જાણવાનું માપ તેની ભાષા છે. To: હિંદુસ્તાનની જિંદગીમાં જિંદગી સેવા કરવા આવું ગુજરાત શક્તિમાન થાઓ, એજ આ ઘોષણાનો ઉદ્દેશ છે.	સમાલોચક, પુસ્તક ૨૨. માર્ચ સને ૧૯૧૭ માં છપાએલા, મુંબઈમાં ગુજર્સભા સમક્ષ તા. ૩૦-૧-૧૯૧૬ ને રોજ આપેલા ભાષણમાંથી, પૃષ્ઠ ૧૨૧-૧૩૨. અથવા ગદ્ય નવનીત, પૃષ્ઠ ૨૭૨.

Name of Author.	Part Selected.	Name of Book or Publication from which the part is selected.
(૯) દત્તાત્રેય કાલેલકર	બુદ્ધ ગયા	હિમાલયના પ્રવાસમાંથી.
(૧૦) રમણભાઈ નીલકંઠ	કોર્ટમાં ' કેસ ' ચાલ્યો	ભદ્રંભદ્રમાંથી પ્રકરણ ૨૫ મું, (આવૃત્તિ ત્રીજી.)
(૧૧) બળવંતરાય ઠાકોર	મુકુલ	દર્શનિયુંમાંથી.
(૧૨) રણજીતરામ વાવાભાઈ	આમદ અને રૂપાંદે	રણજિતકૃતિસંગ્રહમાંથી.
(૧૩) મલયાનિલ	ગોવાલણી	વીસમી સદી, સને ૧૯૧૮ માંથી.
(૧૪) ઝવેરચંદ મેઘાણી	શેત્રુંજીને કાંઠે	સૌરાષ્ટ્રની રસધાર, ભાગ ૫ માંથી.
(૧૫) નવલરામ	વીરમતી નાટક અંક ૧, પ્રવેશ ૧, અંક ૩, પ્રવેશ ૨, અંક ૫, પ્રવેશ ૭.	નવલગ્રંથાવલિ, ભાગ ૧લા માંથી.
(૧૬) ઝવેરીલાલ યાજ્ઞિક	અભિજ્ઞાન શાકુંતલ, અંક ૪	શાકુંતલના ભાષાંતરમાંથી.
(૧૭) કલાપી	ભર્તૃહરિ ને વિક્રમ	કાશ્મીરનો પ્રવાસ, સ્વીડનબોર્ગ, ધર્મવિચાર અને સંવાદો- માંથી, અથવા ગદ્યનવનીત, પૃષ્ઠ ૧૯૩.
(૧૮) મણિશંકર ભટ્ટ	સમરસિંહ અને ચંદ	સંવાદમાલામાંથી અથવા ગદ્ય- નવનીત, પૃષ્ઠ ૪૨૦.

Poetry—

(૧) પ્રેમાનંદ:—નળાખ્યાન, કડવાં ૧-૨૩.

(૨) નરસિંહ મહેતા:—

(a) ભોળીરે ભરવાડણ, હરિને વેચવા ચાલી,

(b) જસોદા તારા કાનુડાને સાન કરીને વાર રે.

(એ બે પદ).

(૩) મીરાંબાઈ:—

(a) મુખડાની માયા લાગી રે,

(b) દેવળ જૂનું રે થયું,

(c) રામ રમકડું જડિયું રે.

(એ ત્રણ પદ).

(૪) અખો:—અખાની વાણી ભાગ ૧ લા માંથી નીચેના છપ્પા,

(a) From:—ખટદર્શનના જુજવા મતા, માંહોમાંહી ખાદી ખતા,

To:—અખા હરિ જાણી હું ટાળ, જન્મ કોટિની ઉતરે ગાળ.

(વેશનિંદાઅંગમાંથી).

(b) From:—ગુરુ થઈ બેઠો હોંસે કરી, કંઠે પાણુ શકે કયમ તરી.

To:—એવા ગુરુ ધણા સંસાર, તે અખા શું મૂકે ભવપાર.

(ગુરુઅંગમાંથી).

(c) From:—કોઈ કહે મોટો શિવ દેવ, કોઈ કહે વિષ્ણુ મોટો અહમેવ.

To:—એમ ગોથાં ખાતો સંસાર, અખા વિના વસ્તુ વિચાર.

(વિભ્રમઅંગમાંથી).

(d) From:—સો અંધામાં કાણો રાવ, આંધળાને કાણા પર ભાવ.

To:—સૌને મન તે કરે કહ્યાણુ, અખા એને હરિ મળ્યાની હાણુ.

(ધુટકળઅંગમાંથી).

(૫) દયારામ:—

(a) જે કોઈ પ્રેમ અંશ અવતરે,

(b) વસ્તુને શું જાણે વ્યાકરણી.

(એ બે પદ).

(૬) ભોળો:—

ભક્તિ શૂરવીરની સાચી છે.

(એ પદ).

(૭) સામળ:—લંકામાં ત્રાસ. અંગદવિષ્ટિમાંથી:—

From:—હાલકહુલક ત્રાસ પડ્યો દોઢીને દેઢી,

To:—કોઈ ને ગણતીમાં નવ ગણે, નામ માત્ર નમતો નથી.

(૮) દલપતરામ:—સંપલક્ષ્મી સંવાદમાંથી:—

From:—સંપ કહે સુણુ રમા, જનમ તારો હું જાણું,

To:—લક્ષ્મીવિના શ્રીવિષ્ણુ જેહ, સમર્થ રહી શકે નહિ તેહ.

(૯) નર્મદાશંકર:—

જય જય ગરવી ગુજરાત, (એ કાવ્ય).

(૧૦) મણિલાલ નલુભાઈ:—અભાનોમિ:—

ગગને આજ પ્રેમની ઝલક છાઈ રે,

(એ કાશી) [આત્મનિમજ્જનમાંથી].

(૧૧) કલાપી:—કલાપીના કેકારવમાંથી

ગ્રામ્ય માતા, (એ કાવ્ય).

(૧૨) મણિશંકર ભટ્ટ:—પૂર્વાલાપમાંથી

મત્તમયૂર, (એ કાવ્ય).

(૧૩) નરસિંહરાવ દીવેટીઆ:—કુસુમમાળામાંથી

આશાપંખીડું, (એ કાવ્ય).

(૧૪) નાનાલાલ કવિ:—

- (a) મારા કેસરભીના કંથ હો,
 (b) સાગર સખે,
 (c) પૂછશે માં કોઈ, પૂછશે માં.
 (એ ત્રણ કાવ્યો).

(૧૫) અરદેશર ખખરદાર:—

- (a) દેવીનું ખખર, (એ કાવ્ય) [સદેશિકામાંથી], and
 (b) From:—જ્યાં જ્યાં વસે એક ગુજરાતી, ત્યાં ત્યાં સદાકાળ ગુજરાત,
 To:—જય જય જન્મ સફળ ગુજરાતી, જય જય ધન્ય અદલ
 ગુજરાત. (આઠમી ગુજરાતી સાહિત્ય પરિષદના અહેવાલ
 તથા નિબંધસંગ્રહમાંથી, વિભાગ ૨, પૃષ્ઠ ૨૭-૨૮).

(૧૬) લલિત:—

- (a) મદૂલી (લલિતનાં કાવ્યોમાંથી) and
 (b) વિન્નેગણ વાંસલડી, i. e.,
 From:—કાલાધેલા કાનુડાની ઝુરે વિન્નેગણ વાંસલડી,
 To:—પ્રભુના જગમાં પ્રભુતાની, કોણ જગાડેવાંસલડી.
 (“ ગુજરાત: ” શ્રાવણ: સં. ૧૯૭૯ માંથી).

(૧૭) બોટાદકર:—વિદ્ધ મૃગ, (કલ્પોલિનીમાંથી).

(૧૮) ખાકે હિંદ:—

- From:—અય હિંદ ભૂમિ તારો, મહિમા દિગંત ગાજે,
 To:—મરીતે અરે ચહીશું પ્યારા વતન કફનને.
 (ઇંદુલાલ યાજ્ઞિકસંપાદિત “ રાષ્ટ્રગીત ” માંથી,
 પૃષ્ઠ ૨૬૮-૨૭૧).

FOR THE B.A. Pass EXAMINATION.

1931

A Prose—

1. Navalram—Kavi Jivan (Navalgranthāvalī, Part I).
2. G. M. Tripathi—Sarasvatichandra, Part II (chapters I-V, pp, 1-136. 4th edition).
3. D. B. Keshavlal Dhruva—Parākram-nī Prasādi.

B Poetry—

1. Bhālāṇa—Kādambarī, Pūrva-bhāga, kaḍavān I-V (edited by D. B. K. H, Dhruva).
2. Akho—Anubhava Bindu.
3. Vallabha—Kuntīprasannākhyān.
4. Manishankar Bhatt—Pūrvālāpa (Edited by Rāmnārāyan Pāthak.)

C History of Literature, Grammar, Rhetoric and Prosody—

1. K. P. Trivedi—Bṛhad Vyākaraṇa, chapters 1-4, 7, 29, 30, 36, 39 and 40.
2. K. M. Jhaveri—Milestones in Gujarati Literature.

1932*A. Prose—*

1. G. M. Tripathi—Navalrām Lakshmīrāmnun Jīvana Charita (Navalgrantha-
vali, Part I, Introduction).
2. Sir Ramanbhai—Kavitā ane Sāhitya, Vol. I (pp. 1-72).
3. N. D. Kavi—Jayā ane Jayanta.

B. Poetry—

As in 1931.

C. History of Literature, Grammar, Rhetoric and Prosody—

As in 1931.

1933*A. Prose—*

As in 1932.

B. Poetry—

Padmanābh, 1st Khand.

Premānand, Abhimanyu Ākhyān.

Akho, Akhe Gitā.

Dayārām, Ajāmil Ākhyān.

Narsinhrao, Kusum Mālā.

C. History of Literature, Grammar, Rhetoric and Prosody—

As in 1931.

FOR THE M. A. EXAMINATION.

[N. B.—The following books are recommended for scholarship, criticism and general information.]

1. Siddha-Hemachandra.—Adhyāya 8, Pāda 4, Sūtras 329—448.
2. Shad-bhāsha-chandrikā (Bombay Sanskrit Series), Appendix, containing illustrations of Apabhraṃśa, pages 141—181.
3. N. B. Divatia.—Gujarati Language and Literature (Wilson Philological Lectures).
4. R. M. Nilkanth.—Kavitā ane Sāhitya.
5. Grierson.—Linguistic Survey of India, Vol. IX, Part II, the portion pertaining to Gujarati.

1931**Subordinate.****Paper I—**

- (a) Unseen passages for translation from English into Gujarati.
- (b) Unseen passages in Gujarati for explanation and criticism in Gujarati.
- (c) Composition on Gujarati.

Paper II—

(a) Texts, prose and poetical, of the modern periods :—

Narmadashankar—Āryotkarsha from Dharma Vichāra, Chapters 32-52; pages 581-850.

Manilal N. Dwivedi.—Sudarśana Gadyāvali (Pages 1-100).

Kanaialal M. Munshi.—Keṭalāk Lekho, Part II.

Govardhanaram.—Sarasvatīchandra, Part IV (Chapters 32-52 from page 587 up to the end), fourth edition.

Batubhai Umarvadia.—The following two plays from Matsyagandhā ane Gāngeya tathā bīja chār Nāṭako :

(1) Matsyagandhā ane Gāngeya.

(2) Loma-Harshinī.

Nanalal D. Kavi.—Vasantotsava.

Narsinhrao Bholanath.—Nupura Zankāra.

Botadkar.—Śaivālinī.

A. F. Khabardar.—Kalikā (stanzas 1-150).

(b) A general outline of the history of the Gujarati Language and Literature.

The following books are recommended for study :—

K. M. Jhaveri.—1. Milestones in Gujarati Literature.

2. Further milestones in Gujarati Literature.

R. B. Keshavlal Dhruva.—Lecture delivered from the Presidential chair at the 2nd Session of the Gujarati Sahitya Parishad.

Narsinhrao Bholānāth.—Lecture delivered from the Presidential chair at the Fifth Session of the Gujarati Sāhitya Parishad.

Himmatlal G. Anjara.—Sāhitya Praveśikā.

Madhya Kālano Sāhitya Pravāha, edited by Sāhitya-Samsad.

Additional for Principal.

Paper III—

The following periods of Gujarati literature with a special study of the authors of those periods stated below for detailed and intensive study :—

Narmada and Govardhana Periods (Samvat 1908-1957).

Special authors :—

1. Narmadashankar.

2. Dalpatram.

3. Govardhanaram.

4. Manilal Nabhubhai.

5. Narsinhrao Bholanath.

Paper IV—

A study of the origin, structure and development of Gujarati Literature with special reference to Philology.

The following books are recommended :—

1. Hemachandfāchārya.—Siddha Hemachandra (Adhyāya VIII, Pāda IV, Sūtras 329-448).

2. Lakshmidhara.—Shadbhāshā-Chandrikā, Bombay Sanskrit and Prakrit Series, No. LXXI).

3. Pandit Bechardas.—Prakrit Grammar.

4. Sir George Grierson.—Linguistic Survey of India (Vol. IX, Part II, portion relating to Gujarati).

5. R. B. Kamalashankar Trivedi.—Bṛhad Vyākaraṇa, (Chapters 4 and 30).

6. N. B. Divatia.—Gujarati Language and Literature, Vols. I and II.

7. Beames.—Comparative Grammar of the Modern Aryan Languages of India (Introduction : 1-121 pages).

8. Dr. L. P. Tessitori.—Notes on the Grammar of the old Western Rajasthan with special reference to Apabhramśa and to Gujarati and Marwari (Indian Antiquary XLIII, February 1914 ff.)

Paper V—

The following texts of the Mediæval period :—

Narsimha Mehta—Songs relating to Jnāna and Bhakti; Gujarati Press Edition.

Bhālāṇa.—Nalākhyāna (first and second) edited by Ramalal Chunilal Modi, Akho.—Chhappā.

Premānanda.—Daśama Skandha (from Kadavān 1 to 57).

Śāmala.—Nanda batriśī.

Vallabha.—Duhśāsana-rudhirapāna.

Nemivijaya.—Śīlavatī-no Rāsa (Prāchīna Kāvya Mālā, Part 35).

Dayārām.—Rasika Vallabha. (Prāchīna Kāvya Mālā Series).

Paper VI—

The following special form of literature with special reference to various forces that moulded that form.

The following typical texts are prescribed for study :

Lyrics.

Mirabai.—Songs (Garabīs).

Dayārām.—Garabīs. (Gujarati Press Edition).

Narmadāshankar.—Vīrarasa-nā Kāvyo.

Narsinharao.—Hṛdaya-viṇā.

Maṇishankar Bhaṭṭa.—Pūrvālāpa. (Edited by Rāmanārāyaṇa Pāṭhak).

Maṇilal Nabhubhai Dvivedī—Ātma-nimajjana.

Kalāpi.—Kalāpi-no Kekārava.

Botādkar.—Nirzariṇī.

Nanalal.—(1) Keṭalāk Kāvyo, Vols. I and II.

(2) Nhānānhānā Rāsa.

Khabardar.—Vilāsikā.

1932

Subordinate.

Paper I—

As in 1931.

Paper II—

(a) Texts, prose and poetical, of the modern periods :—

Navalaram :—

Navalagranthāvali, Part II (Edition of 1915) pp. 378 to 412: હિંદુસ્તાનમાં એક ભાષા, to સ્વભાષાના અભ્યાસનું અગત્ય (both included).

Sir Manubhai N. Mehta :—Speech delivered at the opening of the 8th Gujarati Sahitya Parishad Exhibition (1926) in Bombay, and published in the આઠમી ગુજરાતી સાહિત્યપરિષદનો અહેવાલ તથા નિબંધસંગ્રહ: પુસ્તક ૧, અંક ૧, વિભાગ ૨, પૃષ્ઠ ૮૮-૧૦૧.

Sir Ramanbhai M.

Nilkanth :—કવિતા અને સાહિત્ય, પુસ્તક ૧, પૃષ્ઠ ૧-૧૫૦.

Narsinhrao B. Divatia :— અસત્યભાવારોપણ (from મનોમુકુર).

Anandshankar B. Dhruv :—સંસ્કારી સંયમ અને જીવનનો ઉદ્ધાસઃ (વસન્ત જ્યેષ્ઠ, સંવત ૧૯૮૨).

Dattatraya B. Kalelkar :— પૂર્વરંગ.

Balwantrao K. Thakore :— લિરિક (Lyric).

Nanalal D. Kavi :— ઇન્દુકુમાર, અંક ૨ જો.

Narsinhrao B. Divatia :— રમરણ સંહિતા.

Nanalal D. Kavi :— ન્હાના ન્હાના રાસ, ભાગ ૧ લો ને ૨ જો.

Damodar K. Botadkar :— તત્ત્વિની.

Ardeshir F. Khabardar :— ભજનિકા.

(b) As in 1931.

Additional for Principal.

Paper III—

The following periods of Gujarati Literature with a special study of the authors of those periods stated below for detailed and intensive study :—

Narsinh and Nākar Periods (Samvat 1401—1693.)

Authors for detailed and intensive study—

1. Narsinh Mehta.
2. Miranbāi.
3. Bbālāṇa.
4. Padmanabha.

Paper IV—

A Study of the origin, structure and development of Gujarati Literature with special reference to Philology.

The following books are recommended :—

1. Hemachandrāchārya :—Siddha Hemachandra (Adhyāya VIII, Pada IV, Sutrās 329-448).
2. Lakshmīdhara :— Shadbhāshā Chandrikā, (Bombay Sanskrit Prakrit Series, No. LXXI).
3. Pandit Bechardas :— Prakrit Grammar.
4. Sir George Grierson :— (a) Linguistic Survey of India (Vol. IX, Part II, portion relating to Gujarati.)
(b) Article in the Encyclopædia Britannica on Gujarati and Apabhramsha.
5. Rao Bahadur Kamalāshankar P. Trivedi :— Bṛhad Vyākaraṇa, Chapters 4 and 30.

6. Narsinhrao B. Divatia :—Gujarati Language and Literature, Vols. I and II.
7. Beames :—Comparative Grammar of the Modern Aryan Languages of India (Introduction, Pages 1—121).
8. L. P. Tessitori :—Notes on the Grammar of the Old Western Rajasthani with special reference to Apabhramsha and to Gujarati and Mārawādi (Indian Antiquary, XLIII, February 1914, ff.)

Paper V—

The following texts of the Mediæval period :—

- Narsinh Mehta :—સુરત સંગ્રામ.
- Bhālāṇa :—કાદંબરી (પૂર્વભાગ).
- Akho :—અખે ગીતા.
- Premānanda :—ચંદ્રહાસાખ્યાન.
- Sāmala :—સિંહાસનખત્રીશી, Part I.
- Vallabha :—યુધિષ્ઠિર વૃકોદર સંવાદ.
- Rishabhadas :—ભારત બાહુબલી રાસ (આનંદકાવ્યમહોદધિ, Part III).
- Dayārām :—રસિક વલ્લભ (પ્રાચીન કાવ્યમાળા).

Paper VI—

The following special forms of literature with special reference to various forces that moulded that form.

Akhyāns and Rāsās.

The following typical texts are prescribed for study :—

- નળાખ્યાન.
- સલૈયાખ્યાન.
- ધીરન્નખ્યાન.
- અન્નમિલાખ્યાન.
- ચંદ્રહાસાખ્યાન.
- વિમળપ્રબંધ.
- હીરવિજયસુરિ રાસ.
- શીલવતીનો રાસ.

1933

Subordinate.

Paper I—

As in 1931.

Paper II—

Texts, prose and poetical, of the Modern period :—

Narmadāshankar :—

નર્મદગદ્ય અથવા કવિ નર્મદાશંકર લાલશંકરના ગદ્યાત્મક ગ્રંથોનો સંગ્રહ: ભાગ ૧ લો: રા. સા. મહીપતરામનો સુધારેલો (આવૃત્તિ ૧૯૨૪ ની), પૃષ્ઠ ૧-૪૦.

Govardhanram M.

Tripathi :—

સ્વ: સાક્ષર નવલરામ લક્ષ્મીરામનું જીવન વૃત્તાંત, published in the નવલગ્રંથાવલી.

Nanalal D. Kavi :—

બ્રાહ્મણત્વ (Presidential Lecture delivered at the અખિલ ભારતવર્ષ ઔદીચ્ય બ્રાહ્મણ સમાજ, 18th Conference, at Halvad, 1925).

Mohandas K. Gandhi :—(a) (i) અસત્યરૂપી ઝેર, તથા

(ii) વકીલાતનાં કેટલાંક સ્મરણો: આલાહી ? આત્મકથા ભાગ ૧ લો: પૃષ્ઠ ૧૯; ભાગ ૨જો: પૃષ્ઠ ૪૪-૪૫.

(b) દયાધર્મ, અમદાવાદમાં તા. ૧૩ મી નવેમ્બર ૧૯૨૧ ને દીવસે શ્રીમદ્ રાજચંદ્રની જયન્તી પ્રસંગે કરેલું વ્યાખ્યાન : નવજીવન, પુસ્તક ૩, પૃષ્ઠ ૧૫૮૬-૧૫૯૩.

(c) અમદાવાદમાં મળેલી ચોથી અન્ત્યજ પરિષદના પ્રમુખસ્થાનેથી આપેલું ભાષણ, તા. ૧૩ મી એપ્રિલ ૧૯૨૧નું નવજીવન, પુસ્તક ૨.

(d) સત્યાગ્રહ ને શાંતિસુધારો, નવજીવન, તા. ૧૩ મી એપ્રિલ, ૧૯૨૪: પૃષ્ઠ ૨૬૧-૨૬૨ અથવા ત્યાગમૂર્તિ અને બીજા લેખો: પૃષ્ઠ ૫૨-૫૮.

(e) સ્ત્રી-સ્વાતંત્ર્ય: ગાંધી શિક્ષણ, ભાગ ૫.

(f) સ્વદેશી વિ. ખાદી: નવજીવન, પુસ્તક ૪, પૃષ્ઠ ૧૮૭૮-૧૮૮૧.

(g) હિંદુ ધર્મની બ્રાહ્મ સમાજે કરેલી સેવા: તા. ૨૦ મી ઓગસ્ટ ૧૯૨૮ નું ભાષણ, નવજીવન.

(h) કેળવણીનું વાહન એ સંબંધી: ૧૯૧૭ માં ભરાયેલી બીજી ગુજરાતી કેળવણી પરિષદના પ્રમુખસ્થાનેથી આપેલું ભાષણ: ગાંધીજીની વિચારસૃષ્ટિ, પૃષ્ઠ: ૨૫૬-૨૭૧.

(i) ત્યાગમૂર્તિ અને બીજા લેખો, પ્રકરણ ૧ હું.

(j) કાઠીઆવાડ રાજકીય પરિષદનું પ્રારંભિક ભાષણ: 'હિંદુધર્મની કસોટી' (નવજીવન પ્રકાશન મંદિર) એ પુસ્તકનાં પૃષ્ઠ ૫૪-૬૩.

Ramnarayan V. Pathak :—કાવ્ય શક્તિ (Speech delivered as the President of the Literary Section of the 9th Gujarati Sāhitya Parishad at Nadiad).

Nanalal D. Kavi :— વિશ્વગીતા.

Kanaialal M. Munshi :— તર્પણ (પૌરાણિક નાટકો, અથવા, ગુજરાત, પુસ્તક ૧૦, અંક ૨, કાર્તિક, ૧૯૮૩).

Narasinhrao B. Divatia :—નૂપુર ઝંકાર.

Dolatram K. Pandya :— ઇંદ્રજીતવધ કાવ્ય, પહેલા સાત સર્ગ.

Kānt (Manishankar R.

Bhatt) :—

પૂર્વાલાપ (Edited by Ramnarayan V. Pathak).

Nanalal D. Kavi :— કેટલાંક કાવ્યો: ભાગ ૧ લો તથા ૨ જો.

(b) As in 1931.

Additional for Principal.

Paper III—

The following periods of Gujarati Literature with a special study of the authors of those periods stated below for detailed and intensive study :—

Premānanda, Sāmala and Dayārām Periods (Samvat 1708-1905):

Special Authors :—

1. Akho.
2. Premānanda.
3. Sāmala.
4. Vallabha.
5. Dayārām.

Paper IV—

As in 1932.

Paper V—

The following texts of the Mediæval Period :—

Narsinh Mehta :— ગોવિંદ ગમન.

Akho :— અનુભવ બિંદુ.

Bhālāṇa :—	નળાખ્યાન (First and Second, edited by Rāmālal Chunilal Modi).
Prēmānanda :—	નળાખ્યાન.
Sāmala :—	સિંહાસન બત્રીશી: Part II.
Vallabha :—	કુંતીપ્રસન્નાખ્યાન.
Lāvaṇya Samaya :—	વિમળપ્રબંધ.
Dāyarām :—	ગરબીસંગ્રહ (Edited by the Gujarati Press.)

Paper VI—

The following special form of literature with special reference to the various forces that moulded that form : the following typical texts are prescribed for study :—

ESSAYS.

Narmadāshankar :—	નર્મદગદ્ય (Edition of 1924), pp. 97—124.
Navalaram :—	નવલગ્રંથાવલી, ભાગ ૨ જે, pp. 247—258 : pp. 287—304.
Govardhanram M. Tripathi :—	સાક્ષર જીવન.
Manasukhrām S. Tripathi :—	અસ્તોદય.
Manilal Nabhubhai :—	(૧) અભ્યાસ; (૨) પૂર્વ અને પશ્ચિમ (સુદર્શન ગદ્યાવલી, પૃષ્ઠ ૧-૭૧: ૪૬૫-૫૧૪.)
Sir Ramanbhai Nilkanth :—	(૧) વૃત્તિમય ભાવાભાસ (કવિતા અને સાહિત્ય, પુસ્તક ૧, પૃ. ૪૪૩-૪૯૧), (૨) હાસ્યરસ (કવિતા અને સાહિત્ય, પુસ્તક ૪, પૃષ્ઠ ૧-૧૪૭).
Balwantrao K. Thakore :—	લિરિક (Lyric).
Narsinhrao B. Divatia :—	(૧) કવિતામાં અસંભવ દોષ, (૨) નવલરામ મનોમુકુર, ગ્રન્થ પ્હેલો, પૃ. ૧૭૫-૧૮૩: પૃ. ૨૯૮-૩૪૮).
Kanaialal M. Munshi :—	રસાસ્વાદનો અધિકાર (ગુજરાત, ભાદ્રપદ, સંવત ૧૯૮૨).
Anandshankar B. Dhruv :—	સુદર્શનનો આદ્યદ્રષ્ટા અને પ્રવર્તક, રા. રા. મણીલાલ નભુભાઈ, (published in સુદર્શન ગદ્યાવલી).
Dattatraya B. Kalelkar :—	કાલેલકરના લેખો: પૃષ્ઠ ૪૬૩-૪૯૦.
Uttamlal K. Trivedi :—	સરસ્વતીચંદ્ર અને આપણો ગૃહસંસાર (વસન્ત, સંવત ૧૯૫૮, માધ અને ત્યાર પછીના અંકો)

J. E. Sanjana :—

આધુનિક ગુજરાતી સાહિત્ય (આઠમી ગુજરાતી સાહિત્ય પરિષદનો અહેવાલ તથા નિબંધસંગ્રહ: પુસ્તક ૧, અંક ૨, વિભાગ ૩, પૃષ્ઠ ૨૩૮-૨૬૦).

CHAPTER XVII.—KANNADA.

FOR THE MATRICULATION EXAMINATION.

1931

Prose—

- (1) Mahârâni Lakshmibâi by N. V. Kurdi. Saraswati Mandiram, Dharwar. Price Re. 1 (the whole).
- (2) The first 96 pages covering chapters 1 to 15 of Benjamin Franklin by K. L. Subba Rao, National High School, Bangalore City. Price Re. 1.

Poetry—

- (1) Kumâra Vyâsa Bhârata, Udyoga Parva, Sandhis 7-9 as in the Mysore S. L. C. Departmental Kannada Poetry text-book for 1927, Price As. 2 (Curator, Mysore Govenment Book Depot, Fort, Bangalore City.)
- (2) Chenna Basava Purâna, 4th Kânda, 13th Sandhi, Padyas 1-20.
- (3) Selections from Kusumânjali by Sali Ramachandra Rao, Karnataka High School, Fort, Dharwar :—

Abhisâra, Hambalu, Ondu, Hâdu, Kodagu, Inchara and Hosabâlu.

FOR THE B.A. Pass EXAMINATION.

[N. B.—Candidates are expected to possess an elementary knowledge of the grammar of old Kannada and of rhetoric and prosody, and the main outlines of the history of Kannada language and literature with special reference to the set books.]

1931 and 1932

Books recommended for reading—

- (1) Kannada Kaippidi, Samputa I, pp. 1-173, pp. 240-350.
- (2) Introduction to Caldwell's Comparative Grammar of Dravidian Languages, pp. 1-52, 78-118, 122-150.
- (3) History of Kannada Literature, by E. P. Rice (Heritage of India Series.)
- (4) Sâhitya, an essay by Masti Venkateshayyengar.
- (5) Introductions to Karnatak Kavicharite, Vols. I and II, and Lives of Authors (from Karnatak Kavicharite, Vols. I and II) whose works are set as texts for the respective years.

1931

Books prescribed—

Paper I—

- (1) Ramâshwamedha-sâra by Pujâr.
- (2) Aryakeerti, Part I.
- (3) Swapna Vâsavadatta, by Alasingarchar, M. D.
- (4) Kanaka Dâsara Kirtane, Part I, pages 1-59 (4th edition).

Paper II—

- (5) Gadâyuddha, by Ranna, Ashwâsâs 1-5.
- (6) Shrirâmapattâbhisheka, by Muddana.
- (7) Binnaha, by Masti Venkateshayyengar.

1932

Paper I—

- (1), (2), (3) and (4). As in 1931.

Paper II—

- (5) Jagannâth Vijaya, Ashwâsâs 1 to 3.
- (6) Pativashikarana by Kerur Vâsudevacharya.
- (7) Muddana Mātugalu.
- (8) English Gitegalu, by B. Shrikanthayya, poems 81 to end.

1933

Paper I—

- As in Paper II for 1932 Nos. 5, 6, 7, and 8.

Paper II—

- (1) Samyaktwa Koumudi by Mangarasa, Sandhis 4 and 5.
- (2) Adbhuta Rāmāyana by Nandalike Lakshmī Nārāyana.
- (3) Muddana—Published by Karnataka Sangha, Central College, Bangalore.
- (4) Pūrna Kala by Tirumalamba of Nanjangud.

FOR THE M. A. EXAMINATION.

[N. B.—Candidates are expected to read the standard works on the grammar, poetics and philology of Kannada and the history of Kannada Literature, especially, Apratimavira Charita by Tirumalarya, Shringar Ratnakar, Kavisamaya by Ramanujayyengar, Shabdamanidarpana, Karnatak Kavicharite, and Caldwell's Comparative Grammar of Dravidian Languages (3rd and revised edition).]

1931 and 1932

The following books are recommended for general reading :—

- (1) Grierson's Linguistic Survey, Volume IV.
- (2) A Grammar of the Kannada Language in English by Kittel.
- (3) Preface to Kittel's Kannada English Dictionary.
- (4) Sahitya and Vimarshe by Mâsti Venkateshayyengar.
- (5) The articles on Kannada literature in Prabuddha Karnataka and Karnatak Sâhitya Parishad Patrike.

Paper I—

- (1) English and Kannada introductions to the Karnatak Kavicharite. Vol. 1.
- (2) Caldwell's Comparative Grammar of Dravidian languages, pp. 1-190 (3rd Revised edition).
- (3) Articles published in Prabuddha Karnatak and Karnatak Sâhitya Parishad Patrike on the authors of the prescribed period, with special knowledge of Kannada literature from the 17th to the 19th century, both inclusive, with particular reference to the works of Lakshmish, Tirumalarya and Kumâr Vyâs.

Paper II—

- (1) Pampa Bhârata, Ashwâsâs 1 to 3.
- (2) Shabara Shankar Vilâs, Ashwâsâs 3 to 5.
- (3) Chikkadevarâya Vamshâvali.

Paper III—

- (1) Baratesha Vaibhava by Ratnâkara Varni, Sandhis 1 to 7.
- (2) Angla Kavitâvali by H. Narayanrao.
- (3) Mâdhava Karunâ Vilas (the whole) by Galaganath.
- (4) Uttara Râma Charite by Mulbagal.

Paper IV—

Essay.

Paper V—

Unseen.

Paper VI—

- (1) Caldwell's Comparative Grammar of Dravidian Languages, Part VII, Glossarial affinities, pp. 565 to 624 (3rd Revised edition).
- (2) Kâvyâvalokana, Chapters 2, 3, and 4.
- (3) Apratima Vira Charite by Tirumalarya.
- (4) Chhandomâlike by Shriniwas Raghavacharya.
- (5) Kavisamaya by Ramanujayangar.

CHAPTER XVIII.—SINDHI.

FOR THE MATRICULATION EXAMINATION.

1931

Poetry—

Guldastai Nazam by Mulchand Manghumal Vaswani and Lekhraj Kishinchand Mirchandani, without the Introduction, the Selection from Bulbul's poems, the Selection from Bewas's poems, and one poem of Sabir Dharan Sukni entitled Shah.

Prose—

Nur Jahan (second edition revised) by Dr. H. M. Gurbaxani.

FOR THE B.A. EXAMINATION.

1931, 1932 and 1933

Books recommended for the general study :—

1. Ilm Nahv, by Mirza Kalichbeg.
2. Wado Sindhi Vyakaran, by B. M. Advani.
3. Sindhi Boliji Tarikh, by B. M. Advani.

1931

Prose—

1. Gul Shakar, by Kewalram S.
2. Tahzibi Akhlaq, by Kalichbeg.
3. Gulzar-i-Nasr containing choicest selections from Modern Prose by B. M. Advani.
4. Kumar Sambhav, by Acharya Gidwani.

Poetry—

1. Shah Latif's Sur Sarang and Basant Bahar.
2. Sami ji Sloka, Part II.
3. Motiun ji Dabli, by Mirza Kalichbeg.

1932*Prose—*

As in 1931.

Poetry—

- | | |
|--|----------------|
| 1. Sami ji Sloka, Part III | } 2,000 lines. |
| 2. Bedil, Bekas and Dalpat as given in Chunda Kalam. | |
| 3. Chandan Har, by Kalichbeg. | |

1933*Prose—*

1. Khushid, by Kalichbeg.
2. Gul, by Kewalram.
3. Faust, by Jethmal Parsram.

Poetry—

As in 1932.

CHAPTER XIX.—HINDI.**FOR THE MATRICULATION EXAMINATION.****1931***Prose—*

For thoughtful reading :—

“मानवजीवन” by Ramchandra Varma, published by Hindi Granth Ratnakar Karyalaya, Bombay, essays 1, 2, and 3.

For rapid reading :—

“पुष्पलता” by Sudarshan, published by the same firm. (to be completed).

Poetry :—

For general study :—

“मेरे फूल” by Vanshidhar (Vidyalankar, published by Hindi Granth Ratnakar Karyalaya, Bombay. (to be completed).

For critical study :—

“अयोध्याकाण्ड” annotated by Ram Naresh Tripathi, published by Hindi Mandir, Prayag, Verses 172—202 pp. 177-208.

CHAPTER XX.—HISTORY AND ECONOMICS.**FOR THE INTERMEDIATE EXAMINATION IN ARTS.****1931 and subsequent years.**

1. *Indian History (1757 to 1920)* :—

To be studied so far as it bears on the growth of the Constitution and Administration, thus *excluding* references to wars, conquests, etc., from any standard text-book.

2. *Indian Administration* :—

To be read from an ordinary text-book written for the subject.

[N. B.—The Imperial Gazetteer, Vol. III, Chapter X, and Vol. IV, pages 1 to 56, 126 to 241, 278 to 325 and 384 to 480, and the Government of India Act, 1919 (Consolidated), are recommended to students for general reference.]

FOR THE B. A. EXAMINATION.

The books named below are recommended, not as compulsory subjects of examination, but for the purposes of indicating the scope of reading required.

No questions will be asked on events and topics dating less than six months previous to the end of the last term preceding the date of examination.

1931 and subsequent years.

Pass Course.

History of England (Political, 1756-1919) and the Constitutional History of England, Political History—to be read from *any* standard text-book.

Constitutional History :—

Mariott.—English Political Institutions.

Masterman.—History of the British constitution.

History of India (1526-1761).

The period of Indian History (1526 to 1761) prescribed for the B. A. Examination under the revised courses is to be studied in regard to the main theme, *viz.*, the rise and fall of the Moghul Empire, and in that study only so much of the history of the Sikhs, the Marathas and the European Powers is to be dealt with as is helpful to the study of the main theme.

To be read from *any* standard text-book.

Politics.

Theory of Politics to be read from any standard book, such as Leacock's Elements of Political Science or Gettell's Introduction to Political Science.

Political Economy.

To be read from any standard text-book, such as Gide's Principles of Political Economy, or Saligman's Principles of Economics or Taussig's Principles of Economics.

[N. B.—The general principles of Economics are, wherever possible, to be studied in reference to Indian conditions and problems.]

Additional for Honours Course.

(i) HISTORY.

European History (1715-1900).

Balance of Power, 1789 to 1815, by A. Hassall. Revolutionary Europe, 1789-1815, by H. Morse Stephens. Modern Europe, 1815-1899, by W. Alison Philips.

Greek or Roman History or Ancient Persian History.

Greek History.

Bury's History of Greece. Greenidge's Constitutional History of Greece, Warde-Fowler's City States of the Greeks and Romans.

Roman History.

Shuckburgh's History of Rome or Pelham's History of Rome. Taylor's Constitutional History of Rome. Warde-Fowler's City States of the Greeks and Romans.

Ancient Persian History.

1. The Seventh Great Oriental Monarchy or the Geography, History and Antiquities of the Sassanian or New Persian Empire by George Rawlinson, M. A., 1876, (Ancient Monarchy, Vol. VI).
2. History of Persia by Lt.-Col. P. M. Sykes (1915), Vol. I, Chapters XXXV-XLIII.
3. Ancient History from Monuments Series, Persia by W. A. W. Vaux, New and Revised edition by Rev. A. H. Sayce (1893), Chapter VI.
4. History of Persia from the most early period to the present times by Sir John Malcolm, Vol. I, Chapters VI and VII.
5. Maspero's Struggle of the Nations.

(ii) ECONOMICS.

History of Economic Doctrines, and a period of English Economical History.

Gide and Rist's History of Economic Doctrines.

English Economic History (1776 to 1850) to be read from Cunningham's Growth of English Industry and Commerce, Vol. III, or Toynbee's Industrial Revolution.

Indian Economics.—No text-books are recommended.

FOR THE M. A. EXAMINATION.

1931 and subsequent years.*Group A.*1. *English Constitutional History*—

Taswell-Langmead.—English Constitutional History.

Medley.—English Constitutional History.

Erskine May.—Constitutional History of England (with the supplementary volume).

The study of original documents is strongly recommended, for which Adams and Stevens' Select Documents of English History will be found useful.

2. *Special Period of Indian History* :—*(a) Indian History.*

The History of Hindu India from the fourth to the seventh Century A. D. to be studied with special reference to the Gupta Dynasty and Harsha and the early Chalukyas. Students will be expected to have studied the following original authorities :—

Fleet.—Gupta Inscriptions and Dynasties of the Kanarese districts.

Hiuen Tsiang, trans. Beal, with Walter's Notes.

Bana's Harsha Charita, trans. Cowell & Thomas.

Kalhana's Rajatarangini, trans. Stein (with introduction).

Itsing.—The Buddhistic Religion as practised in India (671-695), English translation published by Clarendon Press, Oxford, 1896.

The following works are recommended for reference :—

- V. A. Smith.—History of India, fourth edition, Ed. Edwards.
 V. A. Smith.—History of Fine Art in India and Ceylon.
 Sir R. G. Bhandarkar.—Peep into the Early History of the Deccan.
 K. M. Panikkar.—Shri Harsha of Kanauj.
 Imperial Gazetteer, Vol. II.
 Allan.—Catalogue of Indian Coins, Gupta Dynasties.
 R. C. Dutt.—Ancient India.
 R. W. Fraser.—Literary History of India (2nd Edition).
 C. V. Vaidya.—History of Mediæval India, Part I.

(b) *Mahomedan Period* (for 1931 and subsequent years).
 History of the Early Mahomedans in India up to 1526.

The following books are recommended :—

- Raverty.—Tabakat-i-Nasiri.
 Elliot and Dawson.—The History of India as told by its own Historians,
 Vols. II, III, IV and V (Trubner, London).
 Briggs.—Ferishta, 4 Vols. (R. Cambray & Co.)
 Al Badauni.—Muntakhab-ut-Tawarikh (Translated by Ranking and published
 by the Asiatic Society of Bengal).
 Thomas.—The Chronicles of the Pathan Kings of Delhi.
 Forbes.—Rasmala.
 Todd.—Rajasthan.
 Sewell.—Forgotten Empire.

[N. B.—Only such portions of these books as deal with the appointed period
 are recommended for study.]

(c) *The Maratha Empire A. D. 1627-1762.*

Students will be expected to have studied the following works in detail :—

- T. Grant Duff.—History of the Marattas, Ed. Edwards.
 J. Sarkar.—Shivaji and his times, 2nd Edition.
 Sen.—Shivaji Chhatrapati.
 Sen.—Administration of the Maratha Empire.
 G. C. Vad.—Selections from the Peshwa's Diaries. (English summaries
 with Ranade's Introduction.)
 M. G. Ranade.—Rise of Maratha Power, Vol. I.
 Sabhasad Bakhar.

The following works are recommended for reference :—

- Sane.—Bhausahabachi Bakhar.
 Khare.—Historical letters.
 G. S. Sirdesai.—Marathi Riyasat.
 V. K. Rajawade.—Marathyanche Itihasachin Sadhanen.
 Mountstuart Elphinstone.—History of India, Ed. Cowell.
 J. K. Forbes.—Ras Mala (Book III.)
 Bombay Gazetteer, Vol. I (History of the Deccan and Gujarat).
 Vol. VII (History of Baroda).

(d) *The British Period 1819-1858.*

The following books are recommended for detailed study :—

- J. Mill.—History of British India, with Wilson's continuation.
 Anderson and Subhedar.—The development of an Indian Policy, 1818-1858.
 Ramsay Muir.—Making of British India. Chapters 7-11.
 G. W. Forrest.—Selections from the writings of the Honourable Mountstuart
 Elphinstone.

- J. W. Kaye.—Life and correspondence of Sir John Malcolm.
J. W. Kaye.—Administration of the East India Company.
A. B. Keith.—Speeches and Documents on Indian Policy.
R. C. Dutt.—(a) Economic History of British India.
 (b) India under the Victorian Age. (Kegan Paul & Co.)
Mukerji.—Indian Constitutional Documents (Thacker Spink & Co.)

The following books are recommended for reference :—

- The Rulers of India series.
 Sir William Lee Warner.—Life of Dalhousie. 2 Vols. (Macmillan & Co.)
 T. R. E. Holmes.—History of the Indian Mutiny, 4th edition.

SPECIAL PERIOD OF ANCIENT PERSIAN HISTORY.

The Achaemenian Period,—559 B. C. to 330 B. C.

(a) *To be Studied in Detail.*

- Cambridge Ancient History, Vol. IV, Chapters I and VII.
Persia in Ency. Brit. Last Ed. (Ancient Persia only).
Grote : History of Greece (1888), Vol. III, Chapters XXXII-XXXIV.
Herodotus, Books I—VI (in any standard translation), with commentaries of
How and Wells or Macan.
King and Thompson : Sculptures and Inscriptions of Darius the Great.
H. B. Tolman : Guide to the Old Persian Inscriptions.

(b) *For Reference.*

- Sykes : History of Persia (1921). Relevant portions only.
Cambridge History of India, Vol. I, Chapter XIV.
Hastings : Encyc. Rel. and Ethics, Art, Achemenians.
Jackson, A. V. W. : Religion of the Achemenian Kings.
Jackson, A. V. W. : Zoroaster, the Prophet of Ancient Iran.
Gobineau : History of Persia. (French.)
Mirkhond's Early Kings of Persia. (Translated into French by Silvestre de Sacy.)
Ancient Iranians according to Herodotus and Strabo, by Dr. J. J. Modi, (Gujarati).
Bactria by H. G. Rawlinson. (Probsthain) 1915.

3. *Theory of Politics.*

1. Sidgewick.—Politics.
2. Bosanquet.—Philosophical theory of the State.
3. Aristotle.—Politics (Weldon's Translation).
4. E. Jenks.—The State of Nation.
5. Prof. Watson.—The State in Peace and War.
6. M. P. Follett.—The New State.
7. Graham Wallas.—Human Nature in Politics.
8. D. G. Ritchie.—Nature Rights.
9. Muirhead and Heatherington.—Social Purpose (Allen & Unwin).

4. *Comparative Politics* :—

- Bryce.—Modern Democracies.
Sidgwick.—Development of European Polity.
Ogg.—Governments of Europe.
Lowell.—Governments and Parties in Continental Europe.

Group B.

Mediæval History.—From Coronation of Charles the Great to the fall of Hobenstauffens, 800 to 1272.

Modern History.—1789-1815.

British Colonial History.—The scope of the subject will be found in books like the following:—

Egerton.—A Short History of the British Policy.

Egerton.—Federation and Unions in the British Empire.

Keith.—Responsible Government in the Dominions.

Group C.

Economic History.—Economic History of Early and Mediæval England and, in addition, the History of Commerce in Europe as outlined by Gibbons.

Ashley.—Economic History.

Lipson.—Economic History of England, the Middle Ages.

Cunningham.—Growth of English Industry and Commerce, Vols, I and II.

Cunningham.—Western Civilization.

Indian Economics.—A study of the principal economic problems in India.

*Group D.**Sociology :—*

Students will be examined in the elementary methods and principles of Sociology according to the standard of treatment in books like the following :—

Herbertson.—Man and His Work.

Newbigin.—Introduction to Physical Geography.

Thomson.—Science of Life.

Thomson and Geddes.—Evolution.

Marett.—Anthropology.

Tylor.—Anthropology.

Stanley Hall.—Youth.

Sorley.—The Moral Life.

Patten.—The Social Basis of Religion.

Hayes.—Introduction to the study of Sociology.

Carver.—Sociology and Social Progress.

Works of Reference.

Spencer.—Study of Sociology.

Spencer.—Principles of Sociology.

Bridges.—Comte's General View of Positivism.

Westermarck.—History of Human Marriage.

Westermarck.—The Origin and Development of Moral Ideas.

Wells.—The Outline of History.

Fleure.—Human Geography in Western Europe.

Muller-Lyer.—History of Social Development.

Geddes.—Cities in Evolution.

CHAPTER XXI.—LOGIC.

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931 and subsequent years.

Students will be examined on the prescribed syllabus according to the standard of treatment in books like—

1. Minto's Logic.
2. Carveth Read's Deductive and Inductive Logic.
3. Mellone's Introductory Text-book of Logic.
4. Fowler's Inductive Logic.
5. Welton and Monahan's Intermediate Text-Book of Logic.

CHAPTER XXII.—PHILOSOPHY.

FOR THE B. A. EXAMINATION.

1931 and subsequent years.*Books recommended.***Pass Course.**

Paper I—

Elements of Ethics :—

1. J. Seth—Ethical Principles.
2. J. S. Mackenzie—Manual of Ethics.
3. Muirhead—Elements of Ethics.

Paper II—

Elements of Psychology :—

1. G. F. Stout—Manual of Psychology.
2. William James—Text-Book of Psychology.
3. McDougall—Outline of Psychology.

Paper III—

History of Philosophy (Ancient Philosophy from Socrates to Aristotle inclusive and Modern Philosophy from Descartes to Kant inclusive):—

1. Cushman—Beginner's History of Philosophy, Volumes I and II.
2. Thilly—History of Philosophy. (G. Bell and Sons.)
3. Falckenberg—History of Modern Philosophy.

Paper IV—

*Essay.***Additional for Honours Course.**

Paper V—

Elements of Metaphysics :—

1. A. E. Taylor—Elements of Metaphysics.
2. Patrick—Introduction to Philosophy.

Paper VI—

Contemporary Philosophy :—

1. H. Hoffding—Modern Philosophers and Lectures on Bergson.
2. Perry—Present Philosophical Tendencies.

Paper VII—

Special Philosopher.

1931

Plato : Republic.

Or

Elements of the six systems of Indian Philosophy.

1932 and 1933

Bradley—Appearance and Reality.

To be read :

Maxmuller—Six Systems of Indian Philosophy.

To be consulted :

1. Keith—

(1) Karma Mimansa.

(2) Sankhya.

(3) Indian Logic and Atomism.

2. Deussen—The System of the Vedanta.

3. Dr. Jha—The Yoga Darshana.

FOR THE M. A. EXAMINATION.

1931 and subsequent years.

History of Ancient Philosophy :—

The following books are recommended for reference :—

Burnet.—Early Greek Philosophy.

Zeller.—Outlines of the History of Greek Philosophy ; Pre-Socrates ; Socrates and the Socratic Schools ; Plato and the Older Academy ; Aristotle and the earlier Peripatetics. Stoics, Epicureans and the Sceptics.

Gomperz.—Greek Thinkers.

History of Modern Philosophy :—

To include a knowledge of the systems of Bacon, Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel and Spencer, to be studied at first hand in—

Descartes.—Discourse on Method.

Leibnitz.—Monadology.

Hume.—Treatise of Human Nature, Book 1 of the Understanding.

Hume.—Enquiry concerning Human Understanding (omitting sections X and XI).

Locke.—Essay on Human Understanding.

Fraser.—Selections from Berkeley.

Kant.—Prolegomena to Future Metaphysics.

Hegel.—Logic.

Spencer.—First Principles.

The following books are recommended for reference :—

Hoffding.—History of Modern Philosophy.

Falckenberg.—History of Modern Philosophy.

Moral Philosophy :—

To be read :

- H. Sidgwick.—Methods of Ethics.
- T. H. Green —Prolegomena to Ethics.
- J. S. Mill.—Utilitarianism.
- Abbott.—Kant's Theory of Ethics.

To be consulted :

- Wundt's Ethical Works.
- Paulsen.—System of Ethics.
- G. Moore.—Principia Ethica.
- Martineau.—Types of Ethical Theory.

Psychology :—

- G. F. Stout.—Analytic Psychology.
- William James.—Principles of Psychology.
- C. S. Myers.—Text-Book of Experimental Psychology.
- Ward.—Principles of Psychology.

Natural Theology :—

Books to be consulted :—

- Flint.—Antitheistic Theories.
- Martineau.—Study of Religion.
- Caird.—Evolution of Religion, Vol. I, 9 Chapters.
- Flint.—Agnosticism.
- Ward.—Naturalism and Agnosticism.
- Royce.—The World and the Individual.
- Pringle Pattison.—The Idea of God.

History of Indian Philosophy :—

The following books are recommended for reference :—

- Bhandarkar.—Vaishnavism and Shaivism.
- Max Muller.—Six systems of Indian Philosophy.
- Sarvadarshana Sangraha of Madhava, translated by Cowell (Trubner Series).
- John Davies.—Hindu Philosophy (Trubner Series).
- Deussen.—Philosophy of the Upanishads.
- Gough.—Philosophy of the Upanishads.
- Rhys Davids.—Buddhistic Psychology.

Special Philosophers :—

(a) Plato :—

To be read :

- Plato's Dialogues (Jowett's Translation).

To be consulted :

- A. E. Taylor.—Plato.
- Stewart.—Myths of Plato : Plato's Doctrine of Ideas.
- Burnet.—History of Greek Philosophy, Thales to Plato.

(b) Aristotle :—

To be read :

- Aristotle's Ethics, Politics and Metaphysics.

To be consulted :

Grant.—Introductory Essays on Aristotle.

Gomperz.—Aristotle.

Barker.—Greek Political Theory : Plato and his predecessors.

(c) Kant—

To be consulted :

Caird.—Critical Philosophy of Kant.

Norman Kemp Smith.—A Commentary to Kant's Critique of Pure Reason.

J. Watson.—Kant explained.

Paulsen.—Kant.

(d) Sankhya—

To be consulted :

Sankhya Karika, translated by H. T. Colebrook.

Sankhya Philosophy by Ballantyne.

Sankhya Pravachana Bhashya by Garbe.

Sankhya System by Keith.

Das Gupta.—History of Indian Philosophy.

The Tattva-Kaumudi of Vachaspathimishra, translated into English by Dr. Ganganath Jha.

(e) Buddhism—

Rhys Davids.—Buddhism (Home University Series).

H. Kern.—Manual of Indian Buddhism.

Sut Zuki.—Introduction to Mahayana Philosophy, published by Luzac.

Yamakam.—System of Buddhistic Thought (Published by the Calcutta University).

De La Vallee Poussin—Opinions.

Warren.—Buddism in translations.

(f) Advaita of Shankaracharya—

To be studied in (i) First four Sutras of the First Pad of the First Adhyaya, and Pads 1 and 2 of the Second Adhyaya : (ii) Vedantasara, translated and annotated by Jacob.

To be consulted :

Deussen.—System of Vedanta according to Shankaracharya.

S. A. Desai.—Vedanta Philosophy.

Das Gupta.—History of Indian Philosophy.

(g) Vishishtadwaita of Ramanujacharya—

Dr. Thibaut's translation of the Shri Bhashya (Sacred Books of the East).

Sociology.—The same books as those recommended in the History Branch.

CHAPTER XXIII.—MATHEMATICS.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

1931 and subsequent years.

The standard of teaching and examination should be as in :—

Devison : Algebra for Secondary Schools, Vol. II.

Barnard and Child : Elements of Geometry, Parts V-VI.

Borchardt and Perrot's Trigonometry, Part I [Chapters II, III, IV, V, VI (§§ 31-41), VII, VIII, IX.]

FOR THE INTERMEDIATE EXAMINATION IN ARTS.

1931 and subsequent years.

Trigonometry.—Loney, Part I, or Borchardt and Perrot, both Parts (excluding Chapters XXIII and XXIV).

Analytical Geometry.—Baker, Chapters I, II, III, V, VIII (Articles 127-142 and 159-167), X (Articles 182-203 and 219-228).

Solid Geometry.—Davison, Chapters I, II (excluding Articles 35-38) and III.

Calculus.—Baker's *Calculus for Beginners*, Pages 1-106 (omitting areas in polar co-ordinates and lengths), Pages 127-128, and 132-136.

FOR THE INTERMEDIATE EXAMINATION IN SCIENCE.

The same books as those for the Intermediate Examination in Arts.

FOR THE B. A. EXAMINATION.

1931 and subsequent years.**Pass Course.**

Algebra and Theory of Equations: Smith's *Treatise on Algebra* (Chapters XXI to XXV and XXXII).

Trigonometry: Loney, Part II (Chapters 1, 2, 3, 5).

Analytical Geometry: Smith (Chapters 1-9).

Differential and Integral Calculus and Ordinary Differential Equations.—Lamb's *Infinitesimal Calculus* (3rd Edition). [Chapters I-VII, VIII (except §§ 103, 104, 108, 114, 115, 118), IX (except §§ 121, 123-125, 129-132), X (except §§ 142-150), XI, XII, XIII (except § 173), XIV (except §§ 177-180), XV (except §§ 189, 191), XVI (except §§ 196-201).]

Statics: Loney's *Elements of Statics*.

Hydrostatics: Loney's *Elements of Hydrostatics*.

Dynamics: Loney's *Elements of Dynamics* (omitting Chapters 3, 9, 10).

[Examples required are of the type of those given in the body of the chapters and not those given at the end of the chapters.]

Astronomy: Godfray (Chapters 1, 2, 7-14, 19, 20, 22).

Honours Course.

Analytical Geometry: Smith (Chapters 1-10).

Solid Geometry: Bell [Chapters I, II, III, IV (§§ 52-53), V, VI, VII (§§ 64-78)].

Algebra and Theory of Equations: Smith's *Treatise on Algebra* (Chapters 21-25, 31-32).

Trigonometry: Loney, Part II.

Differential and Integral Calculus and Differential Equations: (1) Lamb's *Infinitesimal Calculus* (omit §§ 146-150, 173, 191, 201), (2) Gibson's *Elementary Treatise on the Calculus* (omitting §§ 69-71, 95-97, 99). For asymptotes, singular points and curve tracing, the student is recommended to refer to Edward's *Treatise on the Differential Calculus*. (3) Murray's *Differential Equations* (Chapters I-X).

Spherical Trigonometry: Todhunter and Leathem (Chapters 1-5 omitting Reidt's analogies).

Astronomy: Godfray's Astronomy (omitting Chapters 3-6 and §§ 376-387).

Statics: Loney's elements of Statics. Loney's Elementary Treatise on Statics [Chapters I-V, VIII (§§ 134-148), XIII (§§ 250-259)].

Hydrostatics: Loney. [Where necessary, consult Besant and Ramsay for methods of the Calculus.]

Dynamics: Loney's Treatise on Elementary Dynamics (omitting Chapter 3). Loney's Dynamics of a Particle and of Rigid Bodies (§§ 1-56, 65-74, 88-101, 134-135, 144-150, 160-178.)

Note.—Teachers of Mathematics should do their best to interest their students in practical methods relating to Astronomy, and Colleges teaching Mathematics Honours should do their best to have a collection of mathematical (including Astronomical) instruments in connection with their Mathematics Library.

FOR THE B. Sc. EXAMINATION.

Subsidiary.

1931 and subsequent years.

Analytical Geometry: Smith (Chapters 1-9). [Examples to be set will be of the standard of those in the body of the chapters only.]

Solid Geometry: Bell [Chapters I-III, IV (§§ 52-53), V, VII (§§ 64-68, 71)].

Differential and Integral Calculus and Differential Equations: Lamb's Infinitesimal Calculus (3rd Edition) as defined for the B. A. Pass Course with §§ 108, 114, 115, 118, and 173 in addition. For Partial Differential equations consult Murray.

Statics: Loney's Elementary Treatise, as for B. A. Honours.

Dynamics: Loney's Dynamics of a Particle and of Rigid Bodies, as for B. A. Honours.

Principal.

1931 and subsequent years.

Same Text-Books as for B. A. Honours.

FOR THE M. A. AND M. Sc. EXAMINATIONS

1931 and subsequent years.

[N. B.—Students are recommended to read books on the History of Mathematics, especially those on the history of the special groups selected by them and also to read original papers relating to them.]

Books on the History of Mathematics recommended :—

1. Ball's History of Mathematics.
2. Cajori's History of Mathematics.
3. Cantor's Vorlesungen uber Geschichte der Mathematik (4 Vols.)

In the special subjects for both A and B groups, a knowledge of *all* the text-books recommended for any branch is not expected but the Examiners will take into consideration the ground covered by a candidate in assessing his work.

Books recommended.

Group A.

Algebra.—Chrystal's Algebra, Vol. II (omitting the discussion on Algebraic functions, their branch points and Riemann surfaces).

Theory of Equations.—Burnside and Panton, Vol. I and Vol. II (Chapters 13-14).

Solid Geometry.—Bell. (Salmon, Vol. I, might be consulted).

Plane Trigonometry.—Hobson.

Spherical Trigonometry.—Todhunter and Leathem.

Pure Geometry.—Durrel, Askwith, Russel.

Plane Analytical Geometry.—Askwith ; (consult also Salmon's Conics).

Higher Plane Curves.—

Salmon.—Higher Plane Curves.

Ganguli.—Theory of Plane Curves, 2 Vols. (Calcutta University Press).

Hilton.—Plane Algebraic Curves (Oxford University Press).

Modern Analysis.—Goursat's Mathematical Analysis, Vol. I and Vol. II (§§ 1-86).

Consult also :—

Hardy :—Pure Mathematics.

Bromwich.—Infinite Series.

Whittaker and Watson.—Modern Analysis (Chapters 1-6, 9, 10, 12, 20).

Differential Equations.—Forsyth (Elementary Treatise) Goursat's Mathematical Analysis, Vol. II, Part II.

Statics.—Loney's Elementary Treatise on Statics.

Dynamics.—Loney's Dynamics of a Particle and of Rigid Bodies.

Hydrostatics.—Besant and Ramsay.

Spherical Astronomy.—Ball.

Special Groups.

1. *Higher Algebra and Finite Groups* :—

Weber.—Lehrbuch der Algebra, Vols. 1 and 2.

Burnside.—Theory of Groups.

Elliot.—Algebra of Quantics.

Campbell.—Continuous Groups.

Hilton.—Groups of Finite Order.

Millor, Blichfeldt and Dickson.—Finite Groups (John Wiley and Sons).

Bhichfeldt.—Finite Collineation Groups (Chicago University Press).

Sopinus Lie.—Vorlesungen uber continuirliche Gruppen.

2. *Theory of Functions of a Real Variable* :—

Hobson.—Functions of a Real Variable, 2 Vols.

Pierpoint.—Functions of real variables, 2 Vols. (Ginn and Company).

Vallee Poussin.—Cours d' Analyse Infinitesimale (2 Vols).

Young.—Theory of sets of points.

Caratheodory.—Vorlesungen uber Reellen Funktionen.

Hahn.—Theorie der Reellen Funktionen.

Hausdroff.—Grundzuge der Mengenlehre.

Borel.—Leçons sur la théorie des fonctions.

Lebesgue.—Leçons sur l'intégration des fonctions.

Borel.—Leçons sur les fonctions de variables réelles.

Valee Poussin.—Intégrales de Lebesgue.

Jordan.—Cours d'Analyse, Vol. I.

3. *Theory of Functions of a Complex Variable* :—

Osgood.—Leherbuch der Funktionentheorie.

Vivanti.—Theorie der eindeutigen analytischen Funktionen.

Forsyth.—Theory of Functions.

Whittaker and Watson.—Modern Analysis.

Watson.—Complex Integration and Cauchy's Theorem.

Borel.—Leçons sur les fonctions entières.

Lindeloff.—Leçons sur le Calcul des résidus.

Borel.—Leçons sur les fonctions monogènes uniformes d'une variable complexe.

Weirstrass.—Abhandlungen aus der Funktionenlehre.

Harkness and Morly.—Introduction to the theory of Analytic Functions.

4. *Elliptic Functions and Algebraic Functions* :—

Appell et Lacour.—Fonctions elliptiques.

Halphen.—Fonctions elliptiques (3 Vols.).

Tannery et Molk.—Fonctions elliptiques (4 Vols.).

Hancock.—Theory of Elliptic Functions.

Fricke.—Elliptischen Funktionen (3 Vols.).

Whittaker and Watson.—Modern Analysis.

Appell et Goursat.—Fonctions Algebriques.

Forsyth.—Theory of Functions.

Hensel and Landsberg.—Algebraischen Funktionen.

5. *Theory of Numbers* :—

Dirichlet-Dedekin.—Zahlentheorie.

Bachmann.—Zahlentheorie, Vols. I & II.

Bachmann.—Niedere Zahlentheorie, Vol II.

H. J. S. Smith.—Report (see Collected Papers, Vol I.)

Gauss.—Disquisition's Arithmethicae.

(German Translation published by J. Springer, Berlin.)

(French Translation published by Hermann, Paris.)

Mathews.—Theory of Numbers.

Legendre.—Theorie des nombres.

Reid.—Algebraic numbers.

Sommer.—Vorlesungen über Zahlentheorie.

Consult also Dirichelt's Works (2 Vols.) and Dickson's History of Theory of Numbers.

6. *Differential Equations* :—

Forsyth.—Theory of Differential Equations, Vol. IV.

Picard.—Traité d'Analyse, Vol. III.

Jordan.—Cours d'Analyse, Vol. III.

Goursat.—Les équations aux dérivées partielles du premier ordre.

Goursat.—Les équations aux dérivées partielles du second ordre (2 Vols.).

Schlesinger.—Vorlesungen über lineare Differential gleichungen.

Sophus Lie.—Vorlesungen über Differential gleichungen.

7. *Projective Geometry, Non-euclidean Geometry and Line-Complex*:—

Cremona.—Elements of Projective Geometry.

Reye.—Geometric der Lage.

Veblen and Young.—Projective Geometry (2 Vols.).

Baker.—Principles of Geometry (4 Vols.).

Hilbert.—Foundations of Geometry (Translation published by Open Court Publishing Co.).

Heffter and Koehler.—Lehrbuch der analytischen Geometrie (2 Vols.).

Coolidge.—Non-euclidean Geometry.

Bonola.—Non-euclidean Geometry (Translation published by Open Court Publishing Co.),

Bolyai.—Science absolute of space (Open Court Publishing Co.).

Lobatschefski.—Theory of Parallels (Open Court Publishing Co.).

Riemann Weyl.—Über die Hypothesen, welche der Geometrie zugrunde liegen (Memoir). (Julius Springer, Berlin, 1923).

Jessop.—Line Complex.

Koenigs.—La géométrie réglée et ses applications.

8. *Differential Geometry*:—

Darboux.—Théorie des Surfaces (4 Vols.).

Bianchi.—Differential geometry.

Knoblauch.—Differential geometry.

Forsyth.—Differential Geometry.

Eisenhart.—Differential Geometry.

Wilczynski.—Projective Differential Geometry of Curves and Surfaces.

9. *Fourier Series and Harmonic Analysis*:—

Hobson.—Functions of a real variable.

Carlaw.—Fourier Series and Integrals.

Lebesgue.—Leçons sur les séries trigonométriques.

Riemann's Memoir (see his Works).

Heine.—Kugelfunktionen.

Lommel.—Besselchen Funktionen.

Todhunter.—Laplace's, Lamé's and Bessel's functions.

Ferrers.—Spherical Harmonics.

Thomson and Tait.—Natural Philosophy (2 Vols.).

Gray and Mathews.—Bessel Functions.

Burkhardt.—Entwickelungen nach oszillierenden Funktionen.

Neumann.—Beiträge zur Theorie der Kugelfunktionen.

10. *Calculus of Variations and Integral Equations:—*

Hadamard.—Calcal des Variations.

Bolza.—Vorlesungen uber Variationsrechnung.

Kneser.—Lehrbuch der Variationsrechnung.

Hancock.—Calculus of Variations.

Whittaker and Watson.—Modern Analysis (Chapter XI).

Kneser.—Integralgleichungen.

Lalesco.—Equations intégrales.

Heywood et Frechet.—L'équations de Fredholm.

Hilbert.—Theorie der linearen Integralgleichungen.

Volterra.—Leçons sur les équations intégrales et les equations intégro-différentielles.

Group B.

[N. B.—An elementary knowledge of Quaternions and Vector Analysis will be assumed in all applied subjects.]

Books recommended:—

1. *Kelland and Tait.*—Quaternions.
2. *Joly.*—Manual of Quaternions.
3. *Gibbs and Wilson.*—Vector Analysis.
4. *Coffin.*—Vector Analysis.
5. *Weatherburn.*—Vector Analysis, 2 Vols.

Books of Reference:—

1. *Thomson and Tait.*—Natural Philosophy (2 Vols.).
2. *Glazebrook.*—Dictionary of Applied Physics (5 Vols.).

Text-books recommended:—

Differential Calculus.—Edwards.

Integral Calculus.—Todhunter, Williamson.

Solid Geometry.—Bell.

Differential Equations.—Forsyth's Elementary Treatise.

Fourier Series.—Carslaw, Byerley.

Spherical Harmonics.—Ferrers, Byerley, Professor Hobson's article in the Encyclopædia Britannica (11th Ed.).

Statics etc.—Routh (2 Vols.), Minchin (2 Vols.), Appell (Cours de Mécanique Rationnelle, Vols. 1 and 3, so far as they cover the subject), Tarleton (Theory of attractions, 2 Vols.), Williamson (Elasticity).

Dynamics of a Particle.—Routh. Appell (Vol. 1).

Rigid Dynamics.—Routh, Vol. I and Vol. II (first two chapters); Appell Vol. II; Lamb (Higher Mechanics).

Hydrostatics.—Besant and Ramsay.

Hydrodynamics and Sound.—Ramsay; Lamb (Sound).

Electricity and Magnetism.—Jeans, Pidduck (Treatise on Electricity).

Relativity.—Nunn's Relativity and Gravitation (University of London Press).

(Gray's Absolute Measurements in Electricity and Magnetism may be consulted.)

*Special Groups.*1. *Elasticity* :—

Love.—Elasticity.

Consult also Todhunter and Pearson's History of the Theory of Elasticity.

2. *Higher Dynamics* :—

Whittaker.—Analytical Dynamics.

Appell.—Cours de Mécanique Rationnelle (3 Vols.).

Hertz.—Principles of Mechanics.

Gray.—Gyrostatics and Rotational Motion.

Routh.—Advanced Rigid Dynamics.

Mach.—Science of Mechanics.

Klein and Sommerfeld.—Die Theorie des Kreisels.

3. *Hydrodynamics and Theory of Tides* :—

Lamb.—Hydrodynamics.

Basset.—Treatise on Hydrodynamics (2 Vols.).

Darwin.—Tides and kindred phenomena (Murrays).

Darwin.—Scientific Papers (5 Vols.).

Love.—Geodynamics.

4. *Optics and Sound* :—

Herman.—Geometrical Optics.

Heath.—Geometrical Optics.

Drude.—Theory of Optics.

Richardson.—Electron Theory of Matter.

Bateman.—Electrical and optical Wave-motion.

Rayleigh.—Theory of Sound (2 Vols.).

5. *Celestial Mechanics* :—

Moulton.—Celestial Mechanics.

Tisserand.—Mécanique Céleste (4 Vols.).

Resal.—Mécanique Céleste.

Poincare.—Mécanique Céleste (3 Vols.).

Poincare.—Methodes nouvelles de la Mecanique Celeste (3 Vols.).

Brown.—Lunar Theory.

Plummer.—Dynamical Astronomy.

Dziobek.—The mathematical theories of Planetary Motions.

Cheyne.—Planetary Theory.

(Newton and Laplace may be consulted.)

6. *Electricity and Magnetism and Relativity* :—

Maxwell.—Electricity and Magnetism (2 Vols.).

Liwens.—Theory of Electricity.

Larmor.—Ether and Matter.

Lorentz.—Theory of Electrons.

Abraham.—Theorie der Elektrie (2 Vols.).

Walker.—Theory of Electromagnetism.

Kopff.—Mathematical Theory of Relativity (Methuen).

Eddington.—Mathematical Theory of Relativity.

Rice.—Relativity (Longmans).

CHAPTER XXIV.—ANCIENT INDIAN CULTURE.

FOR THE M A. EXAMINATION.

1931 and subsequent years.

(i) *Origin and Evolution of Indian Social and Political Institutions.*

Paper I.

1. Gṛhyasûtras (S.B.E., XXIX and XXX).
2. Manusmṛti (S.B.E., XXV).
3. Minor Smritis (S.B.E., ii, vii, xiv and xxxiii).
4. Kauṭilya. Trans. by Shama Sastri.
5. Pātimokkha : Trans. by Rhys Davids.

Paper II.

1. Cambridge History of India, Vol. I, Chapters 8-12.
2. Mujumdar, R. C. : Corporate Life in Ancient India.
3. Fick : Die Social G. liederung in Nordostlichen Indien Zu Buddha's Zeit (Eng. Trans. by Maitra).
4. Jayasval : Hindu Polity.
5. Senart : Les Castes dans L'Inde.
6. Altekar : Village Communities in Western India (Oxford Univ. Press).

(ii) *Origin and Development of Indian Religion and Philosophy.*

Paper III.

1. Barth : Religions of India.
2. Farquhar : Outline of the Religious Literature of India.
3. Bhandarkar : Vaishnavism and Śaivism.
4. Radhakrishnan : History of Indian Philosophy, 2 Vols.
5. Schrader : Introduction to the Pāncarātra system.

Paper IV.

1. Cambridge History of India, Vol. I, Chapters 4-7.
2. Oldenberg : Die Religion des Veda.
3. Moulton : Early Zoroastrianism.
4. Belvalkar and Ranade : History of Indian Philosophy, Vol. 2, The Creative Period.
5. Oldenberg : Buddha.
6. Jacobi : The Jaina Suttas, Part II, Uttarādhyaṇa and Sūtrakṛtāṅga (S.B.E., Vol. XLV).

*(iii) Indian Archæology and Epigraphy.**Paper V.*

1. Barnett : Antiquities of India.
2. Childe : The Aryans (History of Civilization Series, 1926).
3. Buhler : Indian Palæography.
4. Hultzsch : Introduction to Corpus Inscriptionum Indicarum, Vol. I, (2nd ed.), omitting pages LVI-CXXI.
5. Imperial Gazetteer of India : The Indian Empire, Vol. II, Chapters I-V.
6. Fergusson : History of Indian and Eastern Architecture (2nd ed., 1910).
7. Gruwedel : Buddhistische Kunst im Indien (Eng. Trans. by Gibson, London, 1901).

*(iv) Linguistic Data as Source for Cultural History.**Paper VI.*

1. Schrader (Trans. Jevons) : Pre-historic Antiquities of the Aryan people
2. L de la Vallee Poussin : Indo-européens et Indo-iraniens, pp. 1-101.
3. Bréal—Semantics (English Translation by Cust.)
4. Paul—Prinzipien der Sprachgeschichte, 5th ed., 1920.
5. Meillet—Introduction a la Grammaire Comparée. Chap. 8.

*(v) Early Literature.**Paper VII.*

1. Winternitz : Geschichte der Indischen Literature.
2. Krishnaswami Aiyangar : Some Contributions of South India to Indian Culture, Calcutta, 1923.
3. Moulton : Early Religious Poetry of Persia.

*(vi) Early History.**Paper VIII.*

1. Smith : Early History of India.
 2. Havel : History of the Aryan Rule in India, Chaps. I-XV.
 3. Cambridge History of India, Vol. I, Chaps. 13-25.
 4. Vaidya, C. V. : History of Mediæval India.
 5. R. G. Bhandarkar : History of the Deccan.
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CHAPTER XXV.—B. T. DEGREE EXAMINATION. 1931 and subsequent years.

[N. B.—In the first column (A) books for detailed study and in the second column (B) more advanced books and books of reference are given. These should be studied as far as possible.]

(A)

BOOKS FOR DETAILED
STUDY.

(B)

BOOKS RECOMMENDED FOR
SUPPLEMENTARY READING.

Psychology

1. Introduction to Psychology by Loveday and Green (Oxford).
2. Bearing of Modern Psychology on Educational Theory and Practice, by Meredith (Constable).

1. An Introduction to the Psychology of Education, by Drever (Arnold).
2. The Learning Process, by Colvin, (Macmillan).
3. An Outline of Psychology, McDougall (Methuen).

Principles of Education

1. Education, its Data and First Principles, by Nunn (Arnold).

1. Educative Process, by Bagley (Macmillan).
2. Human Behaviour, by Colvin and Bagley (Macmillan).
3. Social Psychology, by McDougall (Methuen).

History of Education

1. A Summary of the History of Education, by Wodehouse (Arnold).

1. Students' History of Education, by Graves (Macmillan).
2. Doctrines of the Great Educators, by Rusk (Macmillan).
3. The Evolution of Educational Theory by Adams (Macmillan).
4. The Montessori Method, by George (Heinemann).

Indian

1. Ancient Indian Education, by Keay (Oxford).

1. Education and Statesmanship, by James (Longmans).
2. A History of Education in Ancient India, by Mazumdar (Macmillan).
3. The Promotion of Learning under the Mohamedan Rule in India, by Law (Longmans).

Present Day Problems

1. Modern Developments in Educational Practice, by Adams (London).
2. Mental Tests, by Ballard (Hodder and Stoughton).
3. Group Tests of Intelligence, by Ballard (Hodder and Stoughton).

1. Recent Reports of Educational Committees.
2. The Changing School, by Ballard (Hodder and Stoughton).
3. The Fundamentals of Statistics, by Thurstone (Macmillan).
4. The New Examiner, by Ballard (Hodder and Stoughton).
5. The Project Method, by Stevenson (Macmillan).
6. Education on the Dalton Plan, by Parkhurst (Bell).

(A)

BOOKS FOR DETAILED
STUDY.

(B)

BOOKS RECOMMENDED FOR
SUPPLEMENTARY READING.*School Management and Hygiene*

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| <ol style="list-style-type: none"> 1. School Hygiene, by Shaw (Macmillan). 2. School Organization, by Wren (Longmans). 3. A Text Book on Hygiene for Training College Students, by Avery (Methuen). | <ol style="list-style-type: none"> 1. School Hygiene, by Burgerstein (Harrap). 2. The Philosophy of School Management, by Tompkins (Ginn). 3. School and Class Management, by Arnold (Macmillan). |
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Method of Education

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| <ol style="list-style-type: none"> 1. The New Teaching by Adams (Hodder and Stoughton). 2. Principles of Teaching, by Welton (Tutorial). | <ol style="list-style-type: none"> 1. Principles of Teaching, by Raymond (Longmans). |
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Special Methods

THE NEW TEACHING by ADAMS is to be used under the appropriate heads.

English

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| <ol style="list-style-type: none"> 1. The Direct Teaching of English, by Wren (Longmans). 2. The Pronunciation of English, by D. Jones (Cambridge), Part I only. | <ol style="list-style-type: none"> 1. The Scientific Study and Teaching of Languages, by Palmer (Harrap). 2. Occasional Reports No. 4 Modern Methods of Teaching English in Germany, by J. N. Fraser (Government of India Press). 3. The Teaching of Modern Foreign Languages, by Atkins and Hutton (Arnold). |
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Mathematics

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| <ol style="list-style-type: none"> 1. Teaching of Mathematics in Secondary Schools, by Schultze (Macmillan). 2. The Teaching of Arithmetic, by Potter (Pitman). 3. The Teaching of Geometry in Schools, Report of Mathematical Association, 1923 (Bell). | <ol style="list-style-type: none"> 1. The Teaching of Mathematics, by Young (Longmans). 2. Teaching of Algebra, by Nunn (Longmans). 3. The Psychology of Arithmetic, by Thorndike (Macmillan). 4. The Study of Mathematical Education, by Branford (Oxford). |
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History

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| <ol style="list-style-type: none"> 1. The Teaching of History in Elementary Schools, by Archer, Owen and Chapman (A. and C. Black). 2. History Lessons, by Cock (Arnold). 3. Studies in the Teaching of History, by Keatinge (A. and C. Black). | <ol style="list-style-type: none"> 1. The Teaching of History, by Johnson (Macmillan). 2. The Teaching of History, by Hinsdale. |
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Geography

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| <ol style="list-style-type: none"> 1. The Teaching of Geography in Elementary Schools, by Archer, Owen and Chapman (A. and C. Black). 2. Our World—A Human Geography, by C. Morrison (Macmillan). | <ol style="list-style-type: none"> 1. The Teaching of Geography, by Wallis (Cambridge). 2. The Teaching of Geography, by Geikie (Macmillan). 3. Human Geographies by Fairgrieve and Young (Longmans). |
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(A)

BOOKS FOR DETAILED
STUDY.

(B)

BOOKS RECOMMENDED FOR
SUPPLEMENTARY READING.*Science*

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| <ol style="list-style-type: none"> 1. <i>The Teaching of Physics and Chemistry</i>, Smith and Hall (Longmans). 2. <i>The Report of the British Association on the Position of Science Teaching in England</i> (1917). | <ol style="list-style-type: none"> 1. Article on Natural Science by Professor Nunn and Miss Von Wyss in the <i>Practice of Instruction</i>, by Adamson. 2. <i>Natural Science in the Educational System of Great Britain</i>, Government of India, Bureau of Education, Pamphlet No. 3. |
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Classical Languages

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| <ol style="list-style-type: none"> 1. <i>The Principles of Language Study</i>, by Palmer (Harrap). 2. <i>Latin by the Direct Method</i>, by Rouse and Maitland (London Univ.). | <ol style="list-style-type: none"> 1. <i>The Teaching of Latin and Greek</i>, by Bennett and Bristol (Longmans). 2. <i>Special Method and Teaching English Classics</i>, by McMurtry (Macmillan). 3. <i>The Art of Teaching and Studying Languages</i>, by Cotton (Philip). |
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CHAPTER XXVI.—PHYSICS.

1931 and subsequent years.

FOR THE FIRST YEAR EXAMINATION IN ARTS.

Millikan and Gale's "A First Course in Physics" (Ginn & Co.) is recommended but is not prescribed.

FOR THE INTERMEDIATE EXAMINATION IN SCIENCE.

Books recommended.

1. Watson's "Text-book of Physics" (Longmans) or Moore's "Text-book of Intermediate Physics" (Methuen).
2. Allen and Moore's "Text-Book of Practical Physics" (Macmillan).

FOR THE B.A. EXAMINATION.

Pass Course.**1931 and subsequent years.**

The same as those for the Intermediate Science and the B. Sc. Subsidiary (Practical work).

FOR THE B.Sc. EXAMINATION.

As a Subsidiary Subject.

Watson's "Text Book of Physics" (Longmans); Wagstaff's "Properties of Matter" (Tutorial Press); Hadley's "Electricity and Magnetism" (Macmillan) are recommended.

Allen and Moore's "Text Book of Practical Physics" (Macmillan) is recommended.

As a Principal Subject.

Properties of Matter.

Poynting and Thomson (General Physics) omit nothing.

Edser. (General Physics for Students) 1926.

Omit : Ch. IV.

Omit : from Ch. VIII, pages 266-276 (Bending of blades).

Omit : Ch. XIII.

Omit : from Ch. XIV, pages 469-486 (Groupvel).

B.C. McEwwn. (Properties of Matter) Longmans, 1923. Omit nothing.

Perrin. (Atoms) Constables. Omit nothing.

Sound.

Datta. (Sound) Blackie, 1917. Omit Art. 65.

Heat.

Poynting and Thomson. (Heat). Omit Nothing.

Edser. (Heat) Omit nothing.

E. Bloch. (Kinetic Theory of Gases) Methuen, 1924.

Omit : Arts. 23-25, 31.

Omit : Ch. VIII, Arts. 40-42.

Omit : Ch. X.

Birtwistle. (Principles of Thermodynamics) Cambridge 1927.

Omit : Arts. 54-60.

Omit : Ch. VI.

Omit : Arts. 73-77.

Omit : Arts. 99-103, 105, 109-110, 120-124.

Omit : Arts. 142-143, 146-147.

Omit : Ch. XV.

Preston. (Heat) 3rd ed. 1919.

Omit : from Ch. IV, Arts. 152-153, 159.

Omit : from Ch. V, Art. 212.

Omit : from Ch. VI, Arts. 253-260, 286.

Omit : from Ch. VII, Arts. 305-318.

Omit : from Ch. VII, Arts. 337, 344-345, 350-360, 365-366.

Omit : from Ch. IX, Arts. 370-373, 377.

Light.

Houstoun. (Treatise on Light), 1925.

Omit : Ch. XXI.

Edser. (Light) Omit nothing.

Preston. (Light) 4th ed. 1912.

Omit : from Ch. VI, Arts. 84-86.

Omit : from Ch. VII, Arts. 104-107.

- Omit : from Ch. VIII, Arts. 120-121, 124-125.
 Omit : from Ch. IX, Arts. 158-163.
 Omit : from Ch. XII, Arts. 205-206.
 Omit : Chapters XIII-XIV.
 Omit : from Ch. XV, Arts. 224-229.
 Omit : from Ch. XVI, Arts. 253-255.
 Omit : from Ch. XVII, Arts. 266-272, 280.
 Omit : Chapters XVIII-XXI.

Electricity and Magnetism.

- Starling.* (Electricity and Magnetism). 1926.
 Omit : from Ch. XIV, pp. 451-457 (Waves in cables, etc).
Crowther. (Molecular Physics) Omit nothing.
Crowther. (Ions, Electrons and Ionizing Radiations) Arnold & Co. 1927.
 Omit : from Chap. III, Art. 18.
 Omit : Chap. V.
 Omit : Chap. VIII.
Millikan. (The Electron). Omit nothing.
A. Haas. (The New Physics) Methuen. Omit nothing.

FOR THE B.A. Honours EXAMINATION.

The same as those for the B. Sc. Subsidiary Physics.

FOR THE M. Sc. EXAMINATION.

No Text-Books are recommended.

CHAPTER XXVII.—CHEMISTRY.

No text-books are recommended in Chemistry for any of the examinations.

CHAPTER XXVIII—BIOLOGY.

FOR THE INTERMEDIATE EXAMINATION IN SCIENCE.

1931 and subsequent years.

Text-books recommended :—

- Tansley.—Outline of Plant Biology.
 Thoday—Botany for Senior Students.
 Rangachari.—Manual of Botany for India.
 Cavers.—Practical Botany.
 Parker and Bhatia.—Text-book of Zoology for Indian Students.
 Mullan.—Animal Types.
 Powell and Kohiyar.—Practical Biology.
 Farmer and Chaudhari.—Practical Introduction to the Study of Botany.

CHAPTER XXIX—BOTANY.

1931 and subsequent years.*Text-books and reference books recommended :—*

1. Strasburger.—Text-book of Botany (latest English Edition).
2. Scott.—Structural Botany, Vols. I and II.
3. Lowson and Sahni.—A Text-book of Botany (Indian Edition).
4. Rangachari.—A Manual of Botany for India.
5. J. A. Thomson and Geddes.—Evolution (Home University Library).
6. Tansley.—Outlines of Plant Biology.
7. J. R. Green.—Manual of Botany, Vol. I.
8. Keeble.—Practical Plant Physiology.
9. Cavers.—Practical Botany.
10. Bower F. O.—Botany of the Living Plant.
11. Brown.—Text-book of General Botany.
12. D'Almeida and Mullan.—Nephrolepis and Nymphaea.

As a Principal Subject.

1. Goebel.—Organography of Plants, Vols. I and II.
2. Haberlandt.—Physiological Plant Anatomy.
3. Stevens.—Plant Anatomy.
4. Chamberlain.—Methods in Plant Histology.
5. Coulter, Cowles and Barnes.—Text-book of Botany, Vols. I and II.
6. Jost.—Lectures in Plant Physiology.
7. Tansley.—Practical Plant Ecology.
8. Detmer and Moore.—Practical Plant Physiology.
9. Punnett.—Mendelism.
10. Warming.—Ecology of Plants.
11. Schimper.—Plant Geography.
12. Coulter.—Plant Genetics.
13. Stopes.—Ancient Plants.
14. Hardy.—Plant Geography.
15. Brown.—Text-book of General Botany.

FOR THE M. SC. EXAMINATION.

No Text-Books are recommended.

FOR THE B. A. Honours EXAMINATION.

The same as those for the Subsidiary B. Sc. Course.

FOR THE B. A. Pass EXAMINATION.

The same as those for the Intermediate Science and B. Sc. (Subsidiary) Course.

CHAPTER XXX.—ZOOLOGY.

FOR THE B. A. EXAMINATION.

Pass Course.

1931 and subsequent years.

The following books are recommended in addition to those recommended in Biology for the Intermediate Science Examination.

Shipley and MacBride.—Elementary Text-book of Zoology.

Bourne.—An Introduction to the Study of Comparative Anatomy of Animals, Vols. I and II.

Thomson.—Outlines of Zoology.

Borradaile.—Manual of Elementary Zoology.

FOR THE B. SC. EXAMINATION.

*Principal.**B. Sc. (Subsidiary) and B. A. (Honours).*

1931 and subsequent years.

1. *Parker and Haswell*.—Text-book of Zoology, Vols. I and II.
2. *A. Sedgwick*.—Students' Text-book of Zoology, Vols. I, II and III.
3. *A. Lang*.—Text-book of Comparative Anatomy (Invertebrates). Parts I and II.
4. *Wiedersheim*.—Comparative Anatomy of Vertebrates.
5. *Kingsley*.—Comparative Anatomy of Vertebrates.
6. *Reynolds*.—Vertebrate Skeleton.
7. *Swinnerton*.—Outlines of Palæontology.
8. *Marshall and Hurst*.—Practical Zoology.
9. *Drew*.—A Laboratory Manual of Invertebrate Zoology.
10. *Guyer*.—Animal Micrology.
11. *Agar*.—Cytology.
12. *Radach*.—Elements of Histology.
13. *Foster and Shore*.—Animal Physiology for Beginners.
14. *Foster and Balfour*.—Elements of Embryology.
15. *Marshall*.—Frog (with reference to Embryology).
16. *MacBride*.—Text-book of Embryology, Vol. I, Chs. I and II.
17. *Graham Kerr*.—Text-book of Embryology, Vol. II, Chs. I and X.
18. *Wallace*.—Geographical Distribution of Animals, Vols. I and II.
19. *Borradaile*.—Animal and its Environment.
20. *Dendy*.—Outlines of Evolutionary Biology.
21. *Lull*.—Organic Evolution.
22. *Punnett*.—Mendelism.
23. *Poulton*.—Essays on Evolution.
24. *Thomson*.—Science of Life.

25. *Miall*—History of Biology.
26. *Fowler*—Science of Sea.
27. *Weismann*—Germ plasm.
28. *Wiley*—Convergence in Evolution.
29. *Locy*—Biology and its makers.
30. *Wallace*—Darwinism.
31. *Lamarck*—Philosophic Zoologique (English Translation).
32. *D'Vries*—Mutation Theory.
33. *Doncaster*—Heredity in the light of recent research.
34. *Kellicot*—Text-book of General Embryology.
35. *Wall*—Poisonous terrestrial Snakes and how to recognize them.
36. *Heilprin*—Geographical and Geological Distribution of Animals.
37. *Graham Kerr*—Zoology for medical students.

FOR THE M. SC. EXAMINATION.

No Text-books are recommended.

CHAPTER XXXI.—GEOLOGY.
FOR THE B. SC. EXAMINATION.
1931 and subsequent years.

As a Principal Subject.

Text-Books recommended—

1. Geikie.—Text-Book of Geology.
2. Chamberlain and Salisbury.—Geology, Vol. I.
3. Oldham.—Geology of India.
4. Wadia.—Geology of India.
5. Geikie, J.—Structural and Field Geology.
6. Dana.—Text-Book of Mineralogy.
7. J. W. Evans and G. M. Davies.—Elementary Crystallography.
8. H. G. Smith.—Minerals and the Microscope.
9. Holland.—Mineral Resources of India.
10. Thomas and MacAlister.—Geology of Ore Deposits.
11. Cole.—Aids in Practical Geology.
12. Derryhouse.—Geological Maps and their use.
13. Woods.—Palæontology (Invertebrate).
14. Stopes.—Ancient Plants.
15. Seward.—Links with the Past.

As a Subsidiary Subject.

1. Tarr.—New Physical Geography.
2. Lapworth.—Intermediate Text-book of Geology.
3. Geikie.—Class Book in Geology.

4. Wadia.—Geology of India.
5. Kutley.—Elements of Mineralogy.
6. Hatch.—Text-book of Petrology.
7. Kalapesi.—Elements of Petrology.
8. Cole.—Aids in Practical Geology.
9. Imperial Gazetteer of India, Vol. I, Chapters 1 and 2.

FOR THE M. SC. EXAMINATION.

No Text-books are recommended.

FOR THE B.E. (CIVIL) EXAMINATION.

1931 and subsequent years.

Lapworth.—Intermediate Text-book of Geology.

C. S. Fox.—Civil Engineering Geology, London, 1923.

The Imperial Gazetteer of India, Vol. I, Chapter 2, (omitting portions relating to Palæontology).

CHAPTER XXXII—PHYSIOLOGY.

FOR THE B. SC. EXAMINATION.

1931 and subsequent years.

1. A Text-Book of Physiology by William H. Howell, Tenth Edition—1927.
2. Hand-Book of Physiology by W. D. Halliburton and R. J. S. McDowall, Eighteenth Edition—1928.
3. Starling's Principles of Human Physiology by C. Lovatt Evans and H. Hartridge, Fifth Edition—1930.
4. Principles of General Physiology by Sir W. M. Bayliss, Fourth Edition—1924.
5. An Introduction to Biophysics by David Burns, Second Edition—1929.
6. Human Physiology by L. Luciani—5 Volumes.
7. A Text-Book of Biochemistry by A. T. Cameron, 1928.
8. Recent Advances in Physiology by C. Lovatt Evans, Third Edition—1928.
9. Recent Advances in Biochemistry by John Pryde, Second Edition—1928.
10. Practical Physiology by Anrep & Harris—1923.
11. Practical Physiological Chemistry by S. W. Cole, Eighth Edition—1928.
12. Essentials of Chemical Physiology by W. D. Halliburton, J. A. Hewitt and W. Robson—1929.
13. Practical Histology by J. N. Langley—1920.
14. Essentials of Histology by S. E. Sharpey-Schafer and H. M. Carleton, Twelfth Edition—1929.
15. Lectures on History of Physiology by Sir M. Foster.
16. Comparative Physiology by Hogben.
17. Mammalian Physiology by Sherrington and Liddell.

For practical work—

1. Anrep and Harris—Practical Physiology—1923.
2. Cole—Practical Physiological Chemistry—1920.
3. Halliburton—Essentials of Chemical Physiology—1923.
4. Langley—Practical Histology.
5. Schafer—Essentials of Histology.

CHAPTER XXXIII.—MICROBIOLOGY.**FOR THE B. SC. EXAMINATION.****1931 and subsequent years.***Books recommended :—*

Marshall's Microbiology,
Buchanan's General Systematic Bacteriology.
Conn and Conn's Bacteriology.
Bergey's Manual of Determinative Bacteriology.
Duke's Bacteriology of Food.
Eyre's Elements of Bacteriological Technique.
Mackie and McCartney's Introduction to Practical Bacteriology.
Muir and Ritchie's Bacteriology.
Cole's Critical Microscopy.
David Ellis' Practical Bacteriology for Chemical Students.
Orla-Jensen's Dairy Bacteriology.
Giltner's Laboratory Manual in General Microbiology.
Knowle's Lectures in Protozoology.
Percival's Agricultural Bacteriology.
Conn's Agricultural Bacteriology.
Fred and Lohn's Agricultural Bacteriology.

CHAPTER XXXIV.—LAW.*Books Recommended.*

[*Note.*—Every Act mentioned in the following lists should be understood to mean the Act with all subsequent amendments thereof.]

FOR THE FIRST LL.B. EXAMINATION.**1931 and subsequent years.**

1. Sandar's Institutes of Justinian, Books I, II and III with Introduction.
2. Ortolan's History of Roman Law.
3. Salmond's Jurisprudence.
4. Dicey's Constitutional Law.
5. The Government of India Acts of 1915 and 1919.

6. The Negotiable Instruments Act, 1881 (India Act XXVI of 1881).
7. The Indian Majority Act, 1875 (India Act IX of 1875).
8. The Indian Contract Act, 1872 (India Act IX of 1872).
9. The Indian Penal Code (India Act XLV of 1860).
10. The Code of Criminal Procedure (India Act V of 1898).
11. Anson's Law of Contract.
12. Pollock's Law of Torts.
13. Ratanlal and Dhirajlal's Law of Torts.
14. Steven's Mercantile Law (Parts II and III, omitting Companies, Shipping and Stock Exchange).

FOR THE SECOND LL.B. EXAMINATION.

1931 and subsequent years.

1. The Easements Act, 1882 (India Act V of 1882).
2. The Transfer of Property Act, (Revised)*
3. The Indian Trusts Act, 1882 (India Act II of 1882).
4. The Indian Succession Act, XXXIX of 1925.
5. The Indian Registration Act, 1908 (India Act XVI of 1908).
 - (i) Part III (Of Registrable Documents).
 - (ii) Part VI (Of Presenting Documents for Registration).
 - (iii) Part X (of the Effects of Registration and Non-registration).
 - (iv) Part XII (Of Refusal to register).
6. The Indian Limitation Act, 1908 (India Act IX of 1908).
7. The Indian Evidence Act, 1872 (India Act I of 1872).
8. The Deccan Agriculturists Relief Act.
9. The Code of Civil Procedure (India Act V of 1908).
10. Tyabji's Mahomedan Law (Student's Edition).
11. Mulla's Principles of Mahomedan Law.
12. Mayne's Hindu Law.
13. Gharpure's Translation of Vyavahara-Mayukha.
14. Snell's Principles of Equity.
15. The Specific Relief Act.
16. The Indian Companies Act, 1913 (Act VIII of 1913).
17. The Presidency Towns Insolvency Act (Act III of 1909).
18. The Provincial Insolvency Act (Act V of 1920).
19. The following cases from White and Tudor's Leading Cases in Equity :—
 1. Ackroyd *vs.* Smithson.
 2. Basset *vs.* Nosworthy.
 3. Cuddee *vs.* Rutter.
 4. Dyer *vs.* Dyer.
 5. Fox *vs.* Mackreth.
 6. Harding *vs.* Glyn.

* To take effect from 1931 onward.

7. Howard *vs.* Harris.
8. Howe *vs.* Earl of Dartmouth.
9. Keech *vs.* Sandford.
10. Robinson *vs.* Pett.
11. Russel *vs.* Russel.
12. Stapilton *vs.* Stapilton.
13. Seton *vs.* Slade.
14. Woollam *vs.* Hearn.

FOR THE LL.M. EXAMINATION.

1931 and subsequent years.

[The following books are recommended but it is to be distinctly understood that the questions set at the examination will not necessarily be confined to them.]

BRANCH I.

Jurisprudence :—

Austin's Jurisprudence.

Holland's Jurisprudence.

Maine's Village Communities, Early History of Institutions and Early Law and Custom.

Bentham's Theory of Legislation.

Holme's Common Law.

Broom's Legal Maxims, Chapters I, IV, V, VI and VIII.

Roman Law :—

Caius's Institutes (Poste's Edition).

Muirhead's Historical Introduction to Roman Law.

Mackenzie's Roman Law.

International Law :—

(a) Public International Law :—

Hall's International Law.

Wheaton's International Law.

(b) Private International Law :—

Dicey's Conflict of Laws.

Westlake's Private International Law.

Nelson's selected Cases on Private International Law.

Constitutional Law :—

Anson's Law and Custom of the Constitution.

Dicey's Constitutional Law.

Ilbert's Government of India.

Cowel's Tagore Law Lectures (1872).

Montagu and Chelmsford's Report, and the Government of India Acts of 1915 and 1919.

Broom's Legal Maxims, Chapter II.

BRANCH II.

Hindu Law :—

Manu's Institutes, Chapters I, III, VII, VIII, and IX, (Sacred Books of the East, Vol. XXV).

Yajnavalkya's Smriti with Mitakshara, Books I, II and III.

Vyavahara Mayukha.

Smriti Chandrika.

Dattaka Mimamsa.

The Dayabhaga.

Artha Sangraha by Laugakshi Bhaskara translated by Dr. Thibaut.

The Tagore Law Lectures on Marriage, Stridhana, Inheritance, Adoption, Endowments, Interpretation and History of Hindu Jurisprudence.

Mayne's Hindu Law.

West and Buhler's Hindu Law.

Mahomedan Law :—

Ameer Ali's Mahomedan Law, Volumes I and II.

Wilson's Digest of Anglo-Mahomedan Law.

Tyabji's Mahomedan Law.

The Law of Wills :—

Theobald on Wills.

Henderson's Succession.

Mujumdar on the Hindu Wills Act.

Trevelyan's Hindu Wills.

BRANCH III.

The Law of Real Property :—

Challis on Real Property.

Ghose's Law of Mortgage.

The Transfer of Property Act.

Woodfall on Landlord and Tenant.

Williams on Real Property.

Principles of Equity :—

Story on Equity and Jurisprudence.

Ashburner on Equity.

Agnew on the Law of Trusts.

Underhill on the Law of Trusts.

White and Tudor's Leading Cases in Equity.

The Indian Specific Relief Act.

The Law of Easements and Prescription :—

Goddard on the Law of Easements.

Gale on Easements.

The Indian Easements Act.

Tagore Law Lectures of 1882 and 1899.

Customary and Statute Law relating to Land Tenures in British India :—

Phillips and Saroda Charn Mitter's Land Tenures in Bengal.

Baden Powell on the Indian Village Community, and Land Systems of British India.

Case Law relating to the Land Centres of the Bombay Presidency.

BRANCH IV.

Leake on Contracts.

Pollock and Mulla's Indian Contract Act.

Pollock on Torts.

Clerk and Lindsell on Torts.

Bowstead on Agency.

Lindley on Partnership.

Scrutton's Charter Parties.

Smith's Mercantile Law.

Tudor's Leading Cases on Mercantile Law.

Indian Copyright Act.

Coppinger's Law of Copyright.

Sebastian's Law of Trade Marks.

Buckland's Indian Companies Act.

Palmer's Company Law.

Bankruptcy Laws by Bannerjea.

Stephen's History of the Criminal Law of England.

Mayne's Criminal Law.

PART VIII.—APPENDICES**APPENDIX A.****EXAMINATION FOR THE DEGREE OF BACHELOR OF
COMMERCE (B. COM.)**

[N. B.—The examination will be held under these regulations for the last time in the year 1931 for the benefit of such candidates only as have completed the course of study prescribed under the old regulations.]

**(Old Regulations vide pp. 110-116 of the University
Handbook for 1928-29.)**

88. The examination for the Degree of Bachelor of Commerce will be held twice a year in Bombay, commencing on the fourth Monday in March and the second Monday in October.

89. No candidate will be admitted to this examination unless, after passing the Intermediate Examination in Commerce at this University, he shall have kept four terms at a College or Institution recognized by this University in Commerce, and unless he produces satisfactory testimonials in the prescribed form.

[N. B.—Graduates in Arts of every statutory Indian University and the University of Mysore, who have passed a degree examination with Economics as one of their subjects, and graduates in Commerce of other statutory Indian Universities, and the University of Mysore, will be admitted to the B. Com. Degree Examination of this University after an attendance of four terms at a College recognized by this University in Commerce, provided that graduates in Arts thus to be admitted pass in Accounting at the Intermediate Examination in Commerce of this University either before or simultaneously with the B. Com. Degree Examination.]

90. A student who has passed in all subjects but one at the Intermediate Examination in Commerce in conformity with Regulation 74 of that examination (*vide* p. 106 Handbook for 1928-29) will be allowed to keep terms for the B. Com. Examination and will be allowed to appear for the B. Com. Examination after keeping four terms, but will not be declared to have passed that Examination under any circumstances, unless he has passed in the remaining subject of the Intermediate Examination held either in a previous or in the same examination season.

91. Candidates must forward an application to the Registrar two weeks before the commencement of the examination.

92. Each candidate must pay to the Registrar, through the Principal of his College or otherwise, as the Syndicate may direct, a fee of Rs. 50.

93. The Syndicate may from time to time prescribe or recommend text-books in the various subjects of the examination.

94. To pass the examination the candidate must obtain 40 per cent. of the full marks in each subject. Should a candidate, however, fail to obtain 40 per cent. of the full marks in one subject only, he shall be declared to have passed the examination if, on a review of his marks, a majority of not less than two-thirds of the Examiners present at the

final meeting decide that he should pass, provided always that no candidate shall so pass unless he obtains at least 50 per cent. of the total marks in all subjects. Those of the successful candidates who obtain 66 per cent. of the total marks obtainable will be placed in the First Class and those obtaining 50 per cent. in the Second Class.

95.* A candidate who has obtained 50 per cent. of the total marks in any subject at any one examination may, at his option, be excused from appearing in that subject at a subsequent examination and will be declared to have passed the whole examination when he has passed in all the subjects of the examination: Provided that in the subject or subjects in which he appears on the last occasion he must obtain the minimum in each subject required by Regulation 94. Candidates passing the examination in this manner in compartments will not be eligible for a class or for any prize or scholarship to be awarded at the examination.

96. As soon as practicable after the conclusion of the examination, the Examiners will arrange and publish a list of successful candidates in two classes and Pass, the names in the First Class being arranged in order of merit, and those in the Second Class and Pass, in alphabetical order.

97. A certificate will be given to those who pass the examination.

98. Candidates will be examined in the following subjects :—

I.—Business Organization.

II.—Administration.

III.—Mercantile and Industrial Law.

IV.—Special Branches of Economics—

(a) Public Finance.

(b) Currency, Banking, and the Money Market (Elementary Principles).

(c) Elements of Statistics.

V.—Economic History.

VI.—One of the following special subjects :—

A.—Advanced Accounting and Auditing.

B.—Advanced Economic Theory and History.

C.—Advanced Banking.

D.—Actuarial Science.

E.—The Organization of the Indian Cotton Industry.

I.—BUSINESS ORGANIZATION—One Paper.

The nature and constitution of business houses (Partnerships, Companies, etc.). The financing of business. Control and responsi-

* This regulation applies to unsuccessful candidates at the examination of 1921 October and subsequent examinations.

bility. Office routine, including correspondence, drafting, etc. Methods of remuneration. Industrial efficiency and scientific management. Skilful advertising.

II.—ADMINISTRATION—One PAPER.

(a) Indian Administration—

- (1) The Secretary of State and his Council.
 - (2) The Governor General and his Council.
 - (3) The Provincial Governments.
 - (4) Municipal and District Administration.
 - (5) Administrative machinery with respect to Finance, Public Works, Police, Justice, Medical and Sanitary Services, Education, Transport, Irrigation, Land Tenures, Land Revenue, Commerce and Agricultural Departments, etc.
- (b) Main points in the Government of the United Kingdom, so far as they are of general Imperial interest.

Fundamental features of the Constitution—Crown, Parliament, Cabinet, Executive Departments, Civil Service, Method of Legislation.

(c) Relation between the component parts of the Empire.

III.—MERCANTILE AND INDUSTRIAL LAW—Two Papers.

The Indian Law relating to Contracts, Mortgages, Joint Stock Companies, Negotiable Instruments, Charter Parties, Bills of Lading, Fire and Marine Insurance, and the Insolvency in Presidency Towns.

The Provisions of the Indian Stamp and Limitation Acts relating to the above.

IV.—SPECIAL BRANCHES OF ECONOMICS—Two Papers.

(a) *Public Finance*—

- (1) The Fiscal System of India.

Analysis of annual expenditure and income, Imperial, Provincial and Local. Comparison with other fiscal systems.

- (2) Theoretical classification of the various kinds of expenditure and revenue.

Taxation—its justification and its different bases. Proportional and graduated methods. Direct and indirect systems. Taxes on property, income, consumption, with theories of incidence.

National and Municipal loans—Productive and unproductive expenditure. Redemption. Sinking Funds.

(b) *Currency, Banking, and the Money Market. (Elementary Principles.)*

Functions of good money. Present day coinage.

The various standards. Preservation of parity. Legal tender.

Variations in the purchasing power of money.

Indian Currency system.

Development of Banking. The Bank of England.

The Act of 1844. Modern Deposit Banks and the Cheque system. The Clearing House.

The Money Market—Bill Brokers, the Stock Exchange.

Foreign Exchanges.

(c) *Elements of Statistics—*

Method of collecting, tabulating and graphically representing *data*.

Averages. Index numbers.

Important historical statistics as to population, Commerce, wages, etc.

V.—ECONOMIC HISTORY—One Paper.

(a) Summary of the contributions made by older civilizations to the economic development of mankind.

(b) English Economic History as typical of the line of industrial and social evolution in Europe. (The Manor, Fairs, Guilds, Mercantilism, the Domestic System, the Industrial Revolution, Capitalistic production, Control of labour conditions, Commercial Policy.)

(c) Indian Economic Development.

VI.—SPECIAL SUBJECTS—Three Papers.

A. *Advanced Accounting and Auditing—*

(1) The accounts of different kinds of business, including Banks, Insurance Companies, Factories, Mining Companies, Railways, and Hotels, Charitable Institutions, and other non-trading concerns. Partnership accounts, including treatment of goodwill. Income and Expenditure Accounts. Branch Accounts, Cost Accounts, Bankruptcy Accounts, Departmental Accounts, Depreciation, Reserves, Sinking Funds. The Double Account System. Columnar Book-keeping.

(2) Auditing—The continuous and the completed audit, the detection of fraud, technical errors, and errors of principle, First and Subsequent Audit; verifying Cash, Securities, Stock Sheets, Wages Sheets. Special considerations in different classes of audit; valuation of Fixed and Floating

Assets. Forms of Accounts and Balance Sheets. Capital and Revenue Items, the Auditor's Certificate ; the liabilities of Auditors, the conduct of investigations and the certifying of Average Profits.

B. *Advanced Economic Theory and History*—

- (1) Important modern problems of Economic Theory.
- (2) History of Economic Thought.
- (3) Indian Economics.

C. *Advanced Banking*—

(a) Principles—

- (1) *Metallic Currency*.—The functions and economic significance of money. Various forms of money. Metallic currencies and coinage. The English Mint regulations and coinage Acts. Currency deterioration—its causes, measures and remedies. Legal tender ; the various systems prevailing in different countries. Methods of maintaining internal equivalence of legal tender moneys. Question of monetary standard and valuation. Decimal coinage, Various proposals for international money. Method of measuring variations in the value of money. Indian Currency problems.
- (2) *Banking and the Money Market*.—The functions and economic significance of Banking. The general structure and methods of English Banking. The Cheque system and the Clearing House. Banking investments. The short loan fund. The money market—its fluctuations, periodic and other. The reserve and the discount rate. The regulation of note-issue, and the Bank Acts. £1 notes. Comparison with Foreign systems. Recent developments in English Banking. Indian Banking. General Banking Statistics. The Foreign Exchanges. Financial and commercial crisis.

(b) *Banking Law*.

D. *Actuarial Science*—

- (1) The Binomial and Exponential Theorems ; the theory and use of Logarithms, the Elements of the Theory of Probabilities, the Elements of the Calculus of Finite Differences including Interpolation and Summation ; Elementary Differential and Integral Calculus excluding questions requiring the use of Trigonometry.
- (2) Compound Interest and Annuities Certain including the construction and use of Relative Tables. Valuation of Perpetuities, Varying Annuities and Increasing Annuities, Capital Redemption Assurances.
- (3) Life contingencies, including Life Annuities and Assurances and the construction and use of the Life Table, and monetary and other Tables based thereon, excluding questions on the compilation of Tables from Statistics, or on Graduation.

- (4) The classification of Policies for Valuation, and the preparation of Valuation Class Books.

E. *The Organization of the Indian Cotton Industry—*

Introduction.

The Botany of cotton.

The History of cotton cultivation and of the cotton trade with special reference to India.

The World's Production of cotton and India's share in it.

Supply of Raw Cotton.

- (1) Cotton producing areas.
- (2) Organization of cotton cultivation.
- (3) Commercial varieties of cotton.
- (4) Ginning, baling and pressing.
- (5) The marketing and consumption of raw cotton.
- (6) The mechanism of the home and export trade.

Supply of Cotton Yarn.

- (1) Condition of the spinning industry prior to the rise of the factory system, and its development since that time.
- (2) Organization of the spinning industry.
- (3) India's internal and external trade in yarn.

Supply of Cotton Piece-goods.

- (1) Indigenous weaving in India,
- (2) Introduction of factory methods and their development.
- (3) Organization of (a) the manufacture of, (b) the trade in, cotton goods.
- (4) Legislation affecting the cotton industry.
- (5) Life and labour of the cotton operatives.

Labour Questions and Social Problems connected with the Cotton Industry.

99. A candidate who is declared to have passed the examination for the Degree of Bachelor of Commerce under the foregoing regulations, will, on payment of a fresh fee of Rs. 50, be admitted to a subsequent examination without keeping any additional terms in any one of the subjects specified in Regulation 98 (VI), in which he has not already passed, and will, on passing in such additional subject, be awarded a certificate to that effect; provided that no candidate will be allowed to appear thus for examination in more than two special subjects.

APPENDIX B.

BACHELOR OF TEACHING, PART II.

(Old Regulations vide page 134 of the University Handbook for 1928-29.)

147. In Part II of the examination, the candidates will be tested as to their practical skill in class management and class teaching, and no candidate will be declared to have passed unless he has given satisfactory evidence of his ability to manage a class. Each candidate will be required to give lessons in the two special subjects selected by him for Part I.

Due consideration shall be given to the report on the practical work done by the candidate throughout his training by the Head of the Institution which he has attended.

148. A candidate for Part II must obtain, in order to pass, at least 50 per cent. of the total marks. Candidates who obtain 60 per cent. of the total in both parts taken together will be placed in the First Class.

APPENDIX C.

THE FINAL EXAMINATION FOR THE DEGREES OF
M.B., B.S. (PART II)

(Vide pp. 195-199 of the University Handbook
for the year 1928-29.)

(*Examination in this Part will be held for the last time in April 1931.*)

43. No candidate shall be admitted to Part II of the Final examination unless he shall have passed in the whole of Part I of that examination and shall have been engaged in medical studies at a Medical College recognized by this University for at least one clear term after passing in the whole of Part I of the examination and for at least nine terms after passing the Intermediate Examination.

44. Before admission to Part II of the Final Examination each candidate shall present certificates of having satisfactorily attended the following courses :—

In Medicine including Diseases of Children—

- (a) A course of systematic lectures in Medicine, including Clinical Pathology and Therapeutics extending over six terms.
- (b) A course of clinical lectures and demonstrations extending over nine terms.
- (c) A course of demonstrations in Applied Anatomy and Applied Physiology extending over three terms.

In Surgery and Surgical Pathology, including Surgical Diseases of Children—

- (a) A course of systematic lectures extending over six terms.
- (b) A course of clinical lectures and demonstrations extending over nine terms.

- (c) A course of demonstrations in Applied Anatomy and Applied Physiology extending over three terms.
- (d) A course of instruction in Operative Surgery extending over one term.

In Midwifery and Diseases of Women—

- (a) A course of systematic lectures extending over six terms.
- (b) A course of demonstrations and clinical lectures extending over six terms.

In Ophthalmology—

A course of systematic lectures extending over one term.

In Mental Diseases—

A course of not less than ten lectures and demonstrations to be completed in a properly constituted Mental Hospital.

In Applied Physics—

A course of ten lectures.

Each candidate shall also present evidence of having received systematic and clinical instruction in the following subjects :—

Diseases of the Ear, Nose and Throat.

Diseases of the Skin.

Radiology.

Dentistry.

Tuberculosis.

Venereal Diseases.

Anæsthetics. (A candidate should be certified to have administered Anæsthetics on ten occasions.)

Each candidate shall further have attended hospital practice during a period of at least nine terms, including the terms in the out-patient departments as laid down in the regulations for Part I and including also the following periods which shall have been completed subsequent to the periods spent in the out-patient departments :—

- (a) *Medical Wards*—as Clinical Clerk for a period of not less than two terms.
- (b) *Surgical Wards*—as Surgical Dresser for a period of not less than two terms.
- (c) *Midwifery and Gynæcological Wards*—to be completed after finishing (a) and (b)—as Clinical Clerk and Dresser for a period of not less than one term during which each candidate must have attended five labours conducted under the supervision of a qualified member of the medical staff and subsequently conducted five labour cases in the maternity wards of a recognised Hospital. Each student shall, either at the same time or subsequently, also

conduct under adequate supervision a further ten cases of labour so as to complete not less than twenty cases in all; he shall have also attended the Gynæcological wards and out-patient Department of a recognized hospital which provides an ante-natal clinic, for one term.

- (d) *Ophthalmology*—A period of clinical instruction of not less than one term's duration during which instruction shall be given in the use of the ophthalmoscope and in the reading of refractions.

During the final year of the curriculum the candidates shall have received clinical and practical instruction in the special departments mentioned in the last section of the preceding paragraph.

45. Candidates shall apply to the Registrar three weeks before the commencement of the examination.

46. Each candidate shall pay to the Registrar, through the Head of his College, or otherwise as the Syndicate may direct, a fee of Rs. 30. A receipt will be given.

47. Candidates shall be examined in the following subjects :—

- (1) The Principles and Practice of Medicine and Therapeutics including Mental Diseases, Skin Diseases and Anatomy and Physiology as applied to Medicine.
- (2) The Principles and Practice of Surgery, including Ophthalmology, Diseases of the Ear, Nose and Throat, and Anatomy and Physiology as applied to Surgery.
- (3) Midwifery and Gynæcology.

48. The examination shall consist of (i) two written papers, (ii) an oral (and practical) and (iii) a clinical examination, in each subject.

49. Failure to pass the examination will not debar the candidate from appearing at any subsequent examination on the submission of a new application, the payment of a fresh fee and the production of a certificate showing that he has, during the interval between the declaration of his failure and subsequent re-appearance at the examination, pursued a further course* of study in the subjects of the examination to the satisfaction of the Dean or Head of a Medical College recognized by the University.

50. No candidate shall be allowed to pass the examination who fails to obtain in any subject (a) 50 per cent. of the aggregate marks assigned to the whole examination, or (b) 50 per cent. of the marks assigned to the clinical examination, or (c) 40 per cent. of the aggregate marks assigned to the written and oral (and practical) examination. Candidates who obtain 66 per cent. of the total marks obtainable in Parts I and II together shall be placed in the First Class.

*Explanation : The expression 'course of study' occurring in this regulation shall not be deemed to include 'systematic lectures'.

51. A candidate who has obtained in any subject 60 per cent. of the full marks allotted to the whole examination, 50 per cent. in the clinical part of the examination and 50 per cent. in the written and oral (and practical) parts taken together may at his option be excused from appearing in that subject at a subsequent examination but shall not be declared to have passed in Part II until he shall have passed in all the subjects of the examination. Candidates passing the examination in this manner in compartments shall not be eligible for a class or for any prize or scholarship to be awarded at the examination.

52. As soon as practicable after the conclusion of the examination, the Syndicate shall publish a list of successful candidates in two classes, *viz.*, a First Class arranged in order of merit according to the marks obtained by the candidates in the two parts added together, and a Second Class arranged in alphabetical order.

53. A certificate will be given to those who pass the examination.

TRANSITORY PROVISIONS.

54. A candidate admitted to the Intermediate Class of a Medical College in or before June 1923 shall only be required to complete the courses of study laid down in the old regulations. Provided that he shall have completed to the satisfaction of the Head of the Medical College the courses as therein laid down, he shall be eligible to sit for the Intermediate Examination after two years and, when successful at that examination, be eligible to sit for the Final Examination after a further two years; and, should no examination under the old regulations be held at the time at which he would be eligible to sit, he shall be permitted to appear for the corresponding examination under the new regulations without completing any further terms or any additional courses of study and with any exemptions previously earned.

55. For the purposes of rule 54—

- (i) The Intermediate Examination under the new regulations shall be held to correspond with the Intermediate under the old regulations except as regards Materia Medica, Pharmacology and Pharmacy, and furthermore any candidate who shall have passed the Intermediate Examination under the old regulations or shall have been exempted from sitting again therein in Materia Medica, Pharmacology and Practical Pharmacy shall be exempted from sitting in or keeping terms in those subjects at any subsequent examination conducted by the University; and any candidate who shall have passed the Intermediate Examination under the old regulations in Anatomy and Physiology but shall have failed in Materia Medica, Pharmacology and Practical Pharmacy shall be eligible to keep terms for the Final Examination and shall be eligible without keeping any further terms in these subjects to sit for Materia Medica, Pharmacology and

Practical Pharmacy at Part I of the Final Examination when otherwise eligible to sit for that examination.

- (ii) The April Examinations for Part I and Part II under the new regulations taken simultaneously shall together be held to correspond to the April Examination for the Final under the old regulations and the December Examination for Part II under the new regulations and the examination for Part I held in the preceding September shall together be held to correspond to the December Examination for the Final under the old regulations. Candidates appearing under this rule shall be eligible to sit for Part II before passing in Part I wholly or in part, and without the lapse of a term between the examinations for the two parts.
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